Vitamin A Supplementation Coverage Survey
(SVA) after the campaign carried out from 07 to 01/14/2022 in Guinea

REPORT

January 2022

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ACRONYMS AND ABBREVIATIONS

HOW ARE YOU	Vitamin A deficiency
DAN	Food and Nutrition Division
DC	Community Distributors
NSI	National Institute of Statistics
NID	National Vaccination Days
NEITHER	International Nutrition
WHO	World Health Organization
PECS	Post Evaluation Coverage Survey
TFP	Technical and Financial Partners
RGPH	General Population and Housing Census
VAS	Vitamin A supplementation
ZD	Enumeration Area

ABSTRACT

HAS after the campaign to administer vitamin A to children aged 6 to 59 months, a evaluation survey of Vitamin A supplementation coverage, was organized. It made it possible to assess the coverage of vitamin A supplementation in children aged 6 to 59 months and the quality of the organization of the VAS campaign held from January 7 to 14, 2022. Specifically, it aimed to:

- Evaluate the effective coverage of vitamin A supplementation in children from 6 to 59 months;
- Analyze parents' knowledge and perceptions of vitamin A, as well as the mass distribution campaign for these products;
- Identify the factors that influenced the coverage as well as the obstacles to the success of the mass vitamin A supplementation campaign;
- Evaluate the effectiveness of social mobilization activities linked to the mass vitamin A distribution campaign;
- Assess the rate of birth registration in the civil registry;
- Perform a triangulation between the administrative data of the mass campaign and the results of the PECS survey;
- Identify approaches and strategies to correct weaknesses in order to improve coverage during future VAS campaigns;
- Assess the levels of knowledge of vitamin A among health workers and community distributors who participated in the last campaign;

To achieve these objectives, a rigorous methodology has been developed and validated by the technical committee set up for this purpose and then submitted to the National Ethics Committee for Health Research (CNERS) for approval (N°055/CNERS/22) .

First of all, all the health districts were divided into two (2) areas which are the rural environment and the urban environment.

For this evaluation, 1486 households and 2448 children were reached for the quantitative survey.
For the qualitative component, 105 health workers and 105 distributors were surveyed. After collection, the data was analyzed using statistical software (SPSS, Stata).

According to the results of the analyses, the coverage of vitamin A supplementation for the whole is 86%. This coverage could vary between 84% and 87% obtained from the confidence interval calculated at the 95% threshold.

By place of residence, the highest coverage was recorded in rural areas. It is 88%. The actual coverage could be between 87% and 90%. In urban areas, the recorded coverage is 82% which could also vary between 80% and 85%.

By child demographic characteristics, the highest coverage was among children aged 12-59 months compared to those aged 6-11 months. By gender, coverage

the highest was observed in girls. But the significance test carried out at the 5% threshold shows that the difference in terms of coverage observed between these two age groups and between girls and boys is not significant.

In addition, comparative analyzes between **the administrative coverage of the campaign and that resulting from the PEC survey were carried out. The results showed that these two coverages are significantly different.** On the other hand, the results of the quality control carried out by the supervisors confirm the coverage from the PEC survey.

The difference observed between the administrative coverage rate and the coverage rate

from the PEC survey, could be due to several factors, including:

- **Methods for calculating coverage rates: the numerator and the denominator are obtained differently. They come from sources different;**
- **Sampling errors made during the survey (selection household randomization);**
- **In the absence of memory of the persons in charge of the children having been investigated;**
- **The interview of another person instead of the one in charge of the child;**
- **The interview of the persons in charge of the child.**

Regarding the assessment of the level of knowledge of vitamin A supplementation of caregivers, it was carried out using a composite variable.

According to this indicator, one out of four respondents has no knowledge of vitamin A. In other words, these respondents do not know the name of the product that was distributed during the campaign, nor the age at which the first dose was taken. vitamin A, nor its frequency of intake per year, or its benefits. On the other hand, three out of four people surveyed were able to cite at least one correct answer.
In general, this index shows that efforts still need to be made to improve the population's knowledge of the name of the product distributed (vitamin A), its benefits, the age at which it takes its first dose and its frequency of taken within the year.

The same assessment was made with health workers and community workers. The knowledge index of health workers and CDDs on vitamin A is a more in-depth indicator than that calculated from households or caregivers. Health workers and community distributors are health service providers involved in the organization and execution of mass distribution campaign activities organized in Guinea. Thus, improving their knowledge of distributor products would be an important factor that could also improve the knowledge index of caregivers because they are the first sources of information from which the population is informed of the benefits of vitamin A.

By making a comparison analysis between health workers and distributors, we find that the former know the products distributed better.

In addition, the communication strategy used during the campaign, it made it possible to reach, 62% of respondents said they had heard of the campaign. By place of residence, these proportions are 68% and 57% of respondents respectively in rural and urban areas. These results show that few people in charge of children have been touched by the media campaigns organized on the holding of the campaign. However, it has a positive influence on blankets because the children of households that have been informed of the campaign are more likely to be supplemented with vitamin A.

As for the most credible source of information about the vitamin, caregivers trust health staff and community workers overall more. By place of residence, television is the second most reliable source of information, while in rural areas, community workers are the most important source after health workers.

Furthermore, the effectiveness of the mobilization strategy put in place can be measured through the significant influence that being informed of the campaign has had on the coverage of vitamin A supplementation in threshold of 5% according to the Chi-square test. The analyzes showed that 96% of the children of the people who informed of the campaign had been supplemented. This proportion was 67% for the children of parents who were not informed of the campaign.

As part of the interoperability between health and the state, the vitamin A administration campaign was coupled with the birth registration campaign in the civil registry. During the PEC survey, questions on birth registration concerned children aged 6 to 59 months. This could make it possible to assess the interoperability between health and civil registration for past campaigns and the universal registration of children.

Overall only three out of four children have been registered in the civil registry. These high proportions of children registered in the civil registry could be partly due to the combined efforts between health and civil status but also between civil status and other Technical and Financial Partners such as UNICEF, ENABEL within the framework of the universal registration of children.

Finally, the multivariate analyzes made it possible to identify factors having a positive influence on vitamin A supplementation for the entire study area and by place of residence. Acting on these factors could contribute to significantly increasing the coverage of vitamin A supplementation. These are:

- **The vitamin A knowledge index;**
- **The positive perception of those in charge of children on vitamin A :**
- **Visiting health facilities to receive care;**
- **Informing the population of the holding of the campaign ;**
- **The registration of births in the civil status ;**

- **Of letting women take care of the children.**

Moreover, the obstacles could be identified through the reasons for not supplementing with vitamin A in order of importance. It is mainly:

- The lack of total geographical coverage **(distributing agents have not visited)** of all localities (villages, neighborhoods, sectors). This lack of total geographic coverage thus deprives children living in unaffected localities from benefiting from the services provided during the campaign (Vitamin A supplementation, screening for malnutrition, birth registration) (see list localities with more geographical coverage cases).

- The absence of children to supplement at home during the visit of the distributing agents at home. It is the second most mentioned reason, followed by the lack of information about the campaign.
- The lack of information on the conduct of the campaign was reported. Exposure to the media through health workers (Community Distributor, health workers), listening to the radio or television is also a powerful way to explain the supplementation of children with vitamin A.
- The refusal of households or persons in charge of children to have them supplement. It is more pronounced in urban areas than in rural areas.

In addition, interviews with distributors also identified other barriers that could help improve supplementation coverage. These obstacles were addressed in the form of suggestions to be made to improve the coverage of vitamin A supplementation. These suggestions were thus formulated by place of residence.

In rural areas, the first three suggestions are sensitization of heads of household, in order to accept the supplementation and to take the measures (keeping the children at home) so that the children are supplemented; the motivation of distributors and health workers. These three suggestions were the most mentioned. Added to these are better coordination between the community and health personnel, the assurance of a sufficient and prompt supply of Vit A and the regular training of health workers and community distributors.

In urban areas, sensitization of heads of households, media campaigns (information of the population on the campaign) and motivation of health workers are the first three suggestions made. To these are added the continuous training of health and community workers and the motivation of community distributors.

Overall, the post-campaign coverage survey made it possible to assess the various objectives of the campaign. It also made it possible to formulate recommendations based on the results supported by the analyzes carried out from the data collected, in order to improve the activities and coverage of future campaigns.

1. CONTEXT AND RATIONALE

Vitamin A is an essential nutrient for immune function, vision, and proper growth and development. Vitamin A deficiency (VAD) is the leading cause of preventable childhood blindness, and a major contributor to morbidity and mortality from infections, especially among children and pregnant women. It remains a widespread public health problem in sub-Saharan Africa and South Asia where it is respectively responsible for 6 and 8 deaths of children under 5 years old.

Like other countries in the sub-region, Guinea is not immune to this scourge, although the prevalence of VAD in children under five is poorly documented, WHO has estimated that it was 45.8 in 2005, making it a major public health problem.

To counter this scourge, the WHO recommends universal vitamin A (VAS) supplementation for preschool children (6-59 months) twice a year in places where VAD is considered a health problem. public. In these settings, VAS is a proven intervention that reduces the risk of child mortality and morbidity.

It is in this logic of helping to reduce the mortality and morbidity associated with VAD in children under five, that the Guinean government has implemented universal VAS for preschool children since 1999, when that VAS was administered during National Vaccination Days (NDDs) against polio.

Since then, Guinea has shifted its VAS program to routine health services.
During this transition, the country developed a strategy to address some of the gaps in coverage of essential child survival interventions which led to the Child Health Campaigns. Launched twice a year, these campaigns offer a package of essential health and nutrition interventions (vaccination, vitamin A supplementation, deworming treatments, and screening for malnutrition) for young children. Health workers travel from household to household (door-to-door supplementation) or village to village to provide these services and reach children who need to be vaccinated and who may have missed their routine health services for whatever reason .

In collaboration with Guinea's Ministry of Health, Nutrition International has provided technical and financial support for the organization of Child Health Campaigns in three regions of the country during the second half of 2021. Nutrition International has also decided to support the national activities of the Guinean government for the coordination and follow-up of this campaign.

These vitamin A distribution campaigns are always followed by a coverage assessment survey. These evaluative studies provide actors with valid and up-to-date information that can serve as a basis for decision-making and the planning of new interventions.
The results of the PECS surveys carried out from 2018 to 2020 (63 in 2018, 86 in 2019 and 71 in 2020)1 showed a seesaw evolution of vitamin A supplementation coverage, most of which is below 80% threshold, recommended. This finding reveals the need

[1] PECS Survey Report.

clearly identify the factors influencing the coverage of a campaign in order to provide an effective response. This evaluation, entirely funded by NI, will place particular emphasis on the analysis of the determinants whose control is essential to solving the problem of low coverage of vitamin A supplementation.

2. INSTITUTIONAL FRAMEWORK

In accordance with the terms of reference (TOR), the technical committee of the study is made up of the DAN and Office of Strategy and Development, Nutrition Working Group, Nutrition International (NI) and the consultant:

The Food Nutrition Division (DAN) and the Strategy and Development Office (BSD) of the Ministry of Health have:

- Provided guidance for the supervision and coordination of all survey activities executed by the consultant team;
- Provided the consultant with a database of human resources with experience in conducting PEC surveys for the selection of potential investigators;
- Validated the results of the recruitment;
- Shared a list of potential investigators;
- Participated in their training and evaluation;
- Approved the survey logistics plan developed by the consultant team

The consultant : is responsible for the management and analysis of data from the field survey, respecting the quality assurance procedures defined in this ToR. He has

- Developed the survey implementation plan; - Carried out analyzes in the field and adapted the tools to the context; - Finalized the primary database, ensures the management of the server and the downloading of data ;
- Obtained all necessary authorizations to carry out the investigation;
- Created the sampling frame in accordance with the survey plan defined in this framework reference ;
- Proceeded with the recruitment and submits the results to the validation of the DAN;
- Ensured the training of all the human resources necessary for the collection of data in close collaboration with the DAN.
- Managed all logistical aspects of data collection including availability media for collection on ODK.
- Submitted a logistics management plan which will be approved by the DAN and Nutrition International ;

and - Performs analyzes using the syntax and presents the results in a report.

The consultant relied on the guidelines of the DAN to better coordinate the team of collection agents. To achieve this, the DAN, and the consultant, worked in close collaboration with the GTN of Guinea.

The Nutrition Working Group (NWG) has:

- Validated the terms of reference of the PEC survey;

- Reviewed and approved the training plan for the data collection team;
- Provided the draft questionnaire to the consultant;
- Provided quality assurance guidelines to the consulting team;
- Controlled quality throughout the survey; and -
Checked and validated the analysis provided by the team of consultants.

Nutrition Internationale (NI): is the institution that fully funded this study. In addition to other structures, International Nutrition has:

- Participated in the validation of technical documents (protocols, questionnaires) and the application data connection; - Ensured
the control of supporting documents.

Furthermore, the National Institute of Statistics (INS) is the reference technical structure and the central executive body of the National Statistical System (Statistical Law L/2014/019/AN). For this study, he was responsible for validating the technical protocol and drawing the Counting Zones (ZD) in accordance with the sampling plan established in the technical proposal.

3. PURPOSE

3.1. Primary objective

This study aims to assess the coverage of vitamin A supplementation in children aged 6 to 59 months and the quality of the organization of the VAS campaign held from January 07 to 14, 2022.

3.2. Specific objectives

- Evaluate the effective coverage of vitamin A supplementation in children aged 6 to 59 months;
- Analyze parents' knowledge and perceptions of vitamin A, as well as the mass distribution campaign for these products;
- Identify factors that influenced coverage as well as barriers to successful coverage. mass vitamin A supplementation campaign;
- Evaluate the effectiveness of social mobilization activities linked to the mass vitamin A distribution campaign;
- Assess the rate of birth registration in the civil registry;
- Carry out a triangulation between the administrative data of the mass campaign and the results of the PECS survey;
- Identify approaches and strategies to correct weaknesses in order to improve performance. coverage during future SVA campaigns;
- Assess the levels of knowledge of vitamin A among health workers and community distributors who participated in the last campaign;

To achieve these objectives, a rigorous methodology has been developed and validated by a technical committee set up for this purpose.

4. SURVEY METHODOLOGY

In this section, the overall approach of the study, the type of study to be carried out to achieve the assigned objectives, the period for carrying out the study, the setting or area of the study, the target population, the level representativeness of the indicators, the size of the sample, the method of selecting eligible households, service providers, are developed.

4.1. Type of study

This is a cross-sectional study based on a two-stage, WHO-type stratified cluster survey (2018)2 . The clusters were drawn randomly by stratum in accordance with the probability proportional to the estimated size (PPTE) method of the population in urban and rural areas. The weight of each area of residence was based on data from the RGPH-3, produced in 20143 .

For this PECS 2021 survey, two (2) strata have been defined. These are rural and urban. The level of representativeness of the indicators is the place of residence (urban and rural) and national.

4.2. Study period

This assessment was conducted over a period of 40 days including planning, data collection, analysis and report writing.

4.3. Target population

This survey concerned children aged 6 to 59 months living in households. In order to have quality information, the people in charge of these children (mothers or babysitters) were interviewed.

In addition, to assess the quality of services provided and the knowledge of health workers and community distributors about vitamin A, data collection was also carried out.
with these two targets (health workers and community distributors).

4.4. Sampling

Sample size calculation for coverage survey

To calculate the required sample size, the following parameters must be taken into account:

- **Anticipated or expected coverage (p) :** 80;
- **The correlation coefficient between clusters (CCG):** For post-campaign surveys, the high value being the cautious side;
- **Level of Confidence :** It is in good standing 95;

[2] Vaccination Coverage Cluster Surveys: Reference Manual. Geneva: World Health Organization; 2018 (WHO/IVB/18.09). License: CC BY-NC-SA 3.0 IGO available at https://www.who.int/immunization/monitoring_surveillance/Vaccination_coverage_cluster_survey_EN.pdf

[3] The 2014 General Census of Population and Housing gave 34.3% of urban households and 65.7% of households rural.

- **Half-width of the confidence interval (CI) :** the (100-ÿ) of the CI does not have a width of more than ± 5 so its value will be 5;
- **Target number of respondents per cluster (m):** for the PECS survey we recommend **10.** In fact, the WHO asks that values generally be chosen for this factor between **5 and 15,** which correspond to the number of households that a team of interviewers can visit in one day and to the total number of respondents expected in a cluster of medium size, if all targeted respondents are interviewed;

- **Target number of clusters per stratum :** The total size of the divided sample **m** produces the target number of clusters per stratum. It is determined when selecting the sample size, and the clusters are chosen randomly;

- **Factors related to statistical power and the probability of errors :** these factors are the average number of households to visit to find an eligible child and the inflation factor to take non-responses into account. The calculation method will be described below.

According to WHO manual 20184 , a six-step process for calculating sample size clustered for the purpose of estimating or classifying coverage:

1. *Calculate the number of strata in which the survey will be conducted. We will refer to it by the letter A;*
2. *Calculate the effective sample size (EES). Was referred to as B in later calculations;*
3. *Calculate the design effect (SPE). Was referred to as C in later calculations;*
4. *Calculate the average number of households to visit to find an eligible child. Was referred to as D;*
5. *Calculate an inflation factor to take non-response into account called E;*
6. *Use the values collected in steps 1 through 5 to calculate the important sample for survey planning and budgeting.*

HAS	B	VS	D	E	m
2	306	2	By place of residence	1.111111	10

A. Number of strata = 2;

B. Effective sample size = 306 (80 coverage and 5 precision);

vs. Consider that you will interview on average m = 10 respondents per cluster with a cluster effect of 2; D. The following table gives the average number of eligible children per household for each administrative region (stratum).

E. Considering that 5% of households with an eligible child will not be home during the visit or will refuse to participate in the survey. It is therefore necessary to increase the size of the sample by 5% to compensate for non-responses; F. E = Non-response rate is usually very low, but can be associated with data entry errors, so 5 may be safe.

Steps 1 to 6 are summarized in the table below which gives the sample size calculated by stratum (place of residence).

4Vaccination Coverage Cluster Surveys: Reference Manual. Geneva: World Health Organization; 2018 (WHO/IVB/18.09). License: CC BY-NC-SA 3.0 IGO available at https://www.who.int/immunization/monitoring_surveillance/Vaccination_coverage_cluster_survey_EN.pdf

Table 1: Sample size by stratum.

Number of strata (urban and rural)	2
WHO guide page 15 (WHO reference)	CI HW: 5% DEFF: 2
Anticipated or expected coverage	80%
The correlation coefficient between clusters (CCG)	0.167
Trust level	5
Half-width of the confidence interval Target	5
number of respondents per cluster Number of	10
strata Effective sample size the effect of the	2
sampling design Average number of households	306
to visit to find an eligible child Non-response	2
rate Target number of respondents per cluster Estimated total number of	0.997
respondents who completed their questionnaires per stratum Number of	1.111111
households to visit to obtain the number of respondents who completed their	10
questionnaires per stratum Number of households to visit in each stratum Number of households	1224
to survey taking into account the rate of no response by in a cluster.	1356
	678
	12
Number of clusters to be	124
selected Number of clusters per	62
stratum Total number of households to be surveyed	1476

A total of 1476 households will be surveyed in 124 clusters which will be drawn systematically and independently by the National Institute of Statistics.

4.5. Sampling frame and sampling plan for the household survey

4.5.1. Sampling base:

The main sampling base used for this statistical operation is the database of enumeration areas established after the third General Census of the Housing Population (RGPH-3) of 2014 and updated in 2017 by the National Institute of Statistics. This sampling frame is an electronic file of 9668 enumeration areas (EAs).

The table below shows the distribution of clusters according to place of residence by administrative region.

Table 2: Distribution of clusters by area of residence according to administrative region

Region administration	Place of residence				Total percentage and clusters	
	Rural		Urban			
	%	not	% 18.46	not		
Boke	81.54	835	100.00 17.25	189	100.00	1024
Conakry			15.15 29.02	1241	100.00	1241
Faranah	82.75	729	8.82 10.45	152	100.00	881
kankan	84.85	1495		267	100.00	1762
Kindia	70.98	976		399	100.00	1375
Labe	91.18	941		91	100.00	1032
Mamou	89.55	763		89	100.00	852

N'Zérékoré	80.75	1212	19.25	289	100.00	1501
Grand total	71.90	6951	28.10	2717	100.00	9668

Table 3: Distribution of clusters by administrative region according to place of residence

Administrative Region	Place of residence				Total number of clusters
	Rural		Urban		
	%	not	%	not	
Boke	12.01	835	6.96	189	1024
Conakry	0.00		45.68	1241	1241
Faranah	10.49	729	5.59	152	881
kankan	21.51	1495	9.83	267	1762
Kindia	14.04	976	14.69	399	1375
Labe	13.54	941	3.35	91	1032
Mamou	10.98	763	3.28	89	852
N'Zérékoré	17.44	1212	10.64	289	1501
Grand total	100.00	6951	100.00	2717	9668

4.5.2. Sampling plan for the household survey

a) Household and child.

For this survey to assess the coverage rate, a two-stage cluster survey for the selection of households and children was carried out:

In the first degree (cluster draw)

For each of the 2 strata, 124 (62 EAs in rural areas and 62 in urban areas) Enumeration area (EA) or cluster will be drawn systematically and independently by the National Institute of Statistics (INS) using the database survey made up of all the Counting Areas (EAs) of the stratum (place of residence) and taking into account the weight of each region in the stratum.

For the pilot survey, 20 EAs were drawn after having selected the EAs of the actual survey.

In the second degree (household draw)

Randomly and independently, 12 households in each EA were surveyed. This step was carried out by investigators in the field.

A sampling interval (number of households provided by the INS in the cluster divided by 12) was thus calculated from the number of households estimated by the INS.

b) Health providers (Health workers)

The choice of health worker in each cluster was systematic. This is the EPI agent or his deputy if the latter had been involved in campaign activities. In case of absence, of the agent of health and his deputy, the person to be investigated was the one who was most involved in the activities of

countryside. If the cluster has 2 or more health centers, a draw between the health centers health was carried out between these health centres.

c) Community Distributor

For the choice of community distributors, the complete list of community distributors by village or sector was provided by the health worker. Then the name of each community distributor was written on a piece of paper, place this in a container, then ask a person in the center of health to draw one. Investigators will interview the community distributor whose name has been written on the drawn piece of paper. In the absence of the latter, the same process for the draw was taken back.

4.6. Tools and means of collection

4.6.1. Collection tools.

The data was collected mainly by individual interview with the respondents of the study. These interviews were conducted using the CAPI (Computer Assisted Interview) technique based on mobile technology.

Based on what already exists, the data collection tools have been reviewed and adapted by the team technical and validated by the coordination committee. These include, among others:

i. Informed consent form

This form made it possible to collect the informed consent of the people surveyed in the households. selected.

ii. Household and Child Questionnaire

The “household and child” questionnaires were administered in the selected households. In these questionnaires, the part reserved for the household, the following sections will be developed:

a) General information;

b) The profile of the respondent;

c) The characteristics of the household;

d) Access to health services;

e) The campaign communication strategy;

f) Parents' knowledge of vitamin A5 ;

g) The decision to provide the child with vitamin A;

h) The quality of vitamin A administrative activities;

The part reserved for children from 06 to 59 months, dealt with the following sections:

[5] To avoid confusion, red and blue capsules were presented to parents.

i) Child profile and vitamin A6 supplementation ;

j) Time associated with the VAS Services;

k) The declaration of the birth of the child to the civil status: for the specific case of this section, proof that could attest to the declaration of the child to the civil status was requested from the parents. Thus, on the basis of the presentation of evidence (child's birth certificate or extract), or the simple declarations of the respondents the questions were filled in.

iii. Questionnaire Health worker (health personnel)

In the Health worker questionnaire, the following sections have been developed.

a) General information;

b) The profile of the respondent;

c) Knowledge of health workers about vitamin A;

d) The quality of campaign activities;

iv. Questionnaire Community health worker

As in the Health Worker Questionnaire, the Community Health Worker Questionnaire also covered the same sections:

a) General information;

b) The profile of the respondent;

c) Knowledge of health workers about vitamin A;

d) The quality of campaign activities;

v. Monitoring and Quality Control Form for Supervisors

The monitoring and quality control form is the questionnaire used by supervisors to verify the information collected by fieldworkers. It is completed after the visit of the investigators. This questionnaire essentially takes into account two (2) sections:

- General information;
- Vitamin A supplementation.

4.6.2. Use of mobile technology for data collection

The use of mobile devices has made it possible to collect data in-situ (at the source), in a complete way with precise timestamping, GPS coordinates and field photos (for example the team in a travel situation, the Health Centers , birth certificate register). The mHealth system and the platforms designed for this type of collection such as (ONA.IO) were generally accessible via the internet.

4.7. Quality control of household collection

Quality control was ensured by the supervisors, checking the 10 of the data collected by the interviewers. These 10 were randomly selected from the 12 households from each EA sent

[6] To avoid confusion, red and blue capsules were presented to parents.

daily in the database on ONA. To this end, an abbreviated questionnaire (the key questions) and adapted for a double interview in order to assess the coverage of the services provided by these surveyed households, was used. Household responses from the first interview were compared to those from the 2nd interview.

4.8. Training and Recruitment of Supervisors and Investigators

A 5-day training course was organized for candidates for the positions of investigators and supervisors. This theoretical classroom training lasted 04 days and one day for the pilot survey. It was held in Conakry. It focused mainly on: o The objectives targeted by the study;

- o The expected results;
- o The methodology adopted;
- o Identification and delimitation of clusters from EA maps;
- o The census and selection of households; o
- The procedure adopted for the proper execution of the mission;
- o The ethical instructions to be observed for the proper conduct of the investigation;
- o The topics to be covered during the interviews;
- o Use of mobile devices for data collection and transmission.

The theoretical notions were supplemented by practical simulations based on role-playing games using teaching aids (power point presentation, interviewer's manual, exercises).

The interviewers were recruited taking into account a list of criteria including age, academic level, experience in collecting data with tablets and fluency in the local spoken language. In addition, emphasis was also placed on equity between men and women in recruitment. The interviewer should know how to speak the local language of his place of employment, this method makes it possible to cross the language barriers and the knowledge of the localities of the zone of study.

4.9. Pilot survey or pre-test of collection tools

A pilot survey was organized to test the survey system including the methodology, all the collection tools, materials, organization and human resources. This test was carried out in the ZDs not concerned by the actual survey, in the municipality of Dixinn.
Its realization made it possible to improve the methodology, the questionnaire and the application developed for data collection. It also made it possible to verify the quality control mechanism put in place.

4.10. Organization of logistics

Good planning and organization is essential for the success of a PECS survey. All aspects of fieldwork logistics were planned in advance and clearly communicated to team leaders and interviewers during their training sessions.

Prior to the training, the survey coordination team prepared the itinerary for each survey team including the locations of the EAs, the number of day(s) to be spent in each location, and

the approximation of the driving time between each cluster. One of the roles of supervisors was to prepare for the arrival of investigators in neighborhoods, districts, sectors or villages. In the field, the team leader was responsible for managing logistics and providing daily updates to the survey supervisor. He would let her know if something unexpected happened.

4.11. Data gathering

Data collection was carried out by 8 supervisors and 36 interviewers divided into 10 teams. Some teams were made up of 3 investigators and others of 4 investigators depending on the distance to be covered (the region of the investigation), the number of EAs to be covered. It lasted 15 days. The investigators were deployed in the field on the basis of a deployment plan which was drawn up by the team of consultants and validated by the steering committee.

Each interviewer received his survey kit consisting of a Smartphone, a pen, a notebook, a flap shirt, masks (bibs). The investigators were responsible for collecting the data according to the given instructions and ethical considerations. They worked under the direction of supervisors.

Table 4: Distribution of investigators by administrative region.

Administrative Region	Number of teams	Composition of the teams	Number of investigators and THIS
BOKE	1	1 teams of 4 people each 2 teams of	4
CONAKRY		4 people each All teams	
FARANAH	1	1 team of 4 people each 1 team of 4	4
KANKAN	1	people each 1 team of 4 people each	4
KINDIA	1	2 teams of 3 people each 2 teams of	4
LABE	2	3 people each 2 teams of 4 people	6
MAMOU	2	each	6
NZEREKORE	2		8
Total	**10**		**36**

4.12. Collection supervision

During the data collection phase, each supervisor made field visits to ensure, on the one hand, the effective presence of his interviewers on the sites, the quality of the responses obtained and the work of his team. On the other hand, the supervision consisted of providing answers to any problems encountered during data collection and informing the coordinator of the progress of data collection.
A quality control of 10 of the data collected by the interviewers was also carried out by the supervisors. Thus, in each ZD, each supervisor surveyed a household already surveyed by an interviewer for quality control. The households to be surveyed by the supervisors were selected by the technical committee to ensure the random effect. The identification number of households written on their door by the interviewers helped the supervisor to easily find the selected households.

In addition to the local supervision mission carried out by the supervisor, monitoring and quality control missions in the field were also carried out by the coordination committee. These

missions also made it possible to resolve any problems in the field and to check whether the investigators are complying with all the procedures defined.

4.13. Collection follow-up

Monitoring the progress of fundraising has made it possible to measure the performance of the teams, to provide solutions to any difficulties and to ensure that progress is in line with the schedule. To do this, the restricted technical committee carried out:

- **A daily telephone debriefing with all supervisors,** at this debriefing every supervisor did:
  - Update on the number of households, health workers and Community Relays or community distributors surveyed by his team; - The difficulties encountered by its teams and the solutions provided;
  - The agenda for the next day.
- **A final report of the collection** of data collected by supervisor was also transmitted.

4.14. Data processing and analysis

4.14.1. Data cleaning and statistical analysis

During data collection, collected data was systematically transferred through the mobile phone network. This data was systematically checked by supervisors and consultants. At the end of the collection, the data received on ONA was extracted for data analysis. The first step was to clean up the file and correct the data. It consisted of identifying inconsistencies, missing data and errors related to data entry on the tablets. This operation was applied to all parameters.

SPSS and STATA software were used to verify each parameter and record and resolve discrepancies before data fusion and analysis.
The technical team has planned the responses to each type of error and applied them. If the data management team changed values in the database, those changes were recorded in a cleanup log. All changes are made in SPSS using syntax, without changing values in the original database. This practice made the changes reproducible and reversible when necessary. This software includes comments and parameters in the syntax files or the do.files allowing to understand the reasons for the change of the value.

4.14.2. Calculation of weighting coefficients

The distribution of the sample among the domains being not proportional to that of the population, weighting coefficients were thus used to be able to obtain results by domain and for the whole country. The calculation of the weighting coefficients therefore made it possible to correct the weight of each EA and the weight of each domain for the estimates at the national level. Sampling probabilities were calculated for each sampling degree and in each stratum.

ÿ **Sampling weighting**

The first weight is the sampling weight, which represents the probability that the respondent will be selected to participate in the survey: It is the inverse of the probability of selection.

In the PECS framework with a two-stage sample, the sampling weight took into account the probability that the cluster was selected and the probability that the household was selected, given that the cluster was selected. Thus, the original enumeration area (cluster) selection probabilities from the HIPC sample or any other method employed and the household selection probability were used to calculate the weight by
cluster.

e 'é ÿ e = 1/() Probability that the cluster was selected) x (Probability that the household was selected

- Probability that the cluster has been selected = number of clusters selected in the stratum / total number of clusters in the stratum

- Probability that the household was selected = number of eligible households selected in the cluster / total number of eligible households in the cluster

4.14.3. Statistical analyzes

The analyzes were carried out using SPSS version 24 and STATA software, version 15.0, in order to obtain the prevalences (CI at 95). This made it possible to apply the weighting coefficients and to calculate the coverages and the confidence intervals taking into account the sampling plan.

As for the analysis, it made it possible to produce descriptive statistics according to the distribution of the variables, in accordance with the analysis plan. It focused on:

- Descriptive statistics; -
Calculation of indicators (coverage resulting from the survey, etc.);
- The list of tables (single frequency, cross tables);
- Bivariate analysis (calculation of Chi square, Odds ratio, confidence interval at 95).

5. Ethical Considerations

To initiate data collection operations, the various study documents were submitted for approval by the Ethics Committee.
Given that in all research, ethical and deontological rules must be respected and announced to the respondents before data collection, we have thus explained to the respondents of the households to be surveyed, to the community distributors and to the health personnel involved in the execution of the campaign, the purpose of the study emphasizing anonymity. In addition, we have made the eventual commitment to feed back the results at all levels of decision-making.

6. Consideration of covid-19

In this context of COVID-19, it is very important to take preventive measures into account, in particular social distancing, wearing a mask and washing hands during the training of interviewers, the movement of teams, the administration of questionnaires to study targets. We ensured strict compliance with barrier measures at all phases of the study. This in accordance
the provisions in force in the operational guide for vitamin A supplementation in the context of COVID 19, namely:

- Ensure that all actors have evidence of COVID-19 test negativity dating back at least 24 hours and/or vaccination against Covid 19.
- Ensure the availability of protective equipment in sufficient quantity on the basis of the planning
- Ensure the application of barrier measures at all stages of the implementation process of the investigation.
- Ensure the mandatory wearing of a mask and compliance with physical distancing measures in keeping at least 1.5 meters between individuals during preparatory meetings, training supervisors and interviewers and data collection;
- Ensure the availability of hydroalcoholic solution or soap for cleaning the hands for all those involved in implementing the survey;
- Ensure regular washing/cleaning of hands with soap and water or solution hydroalcoholic during all survey activities
- Ensure compliance with hygiene measures;
- Contribute to raising awareness against the spread of the coronavirus;
- Ensure that physical distancing is respected during supervisions, meetings, etc.
- Ensure the supervision of teams at all levels in compliance with barrier measures against COVID-19;
- Carry out daily debriefings in compliance with COVID-19 barrier measures.

7. Dissemination of study results.

After analyzing the data and writing the report, the results of the evaluation study were shared according to the recipients of the study. First, the study report was shared with the members of the technical committee before the presentation of the preliminary results. The final report after the integration of the recommendations, was shared in the form of hard copies or electronic format (on the website of the partners, on USB key).

8. STUDY RESULTS

After data collection and analysis, the results were according to the study targets. It is :

- Households and respondents surveyed - Children from surveyed households - Health personnel involved in the campaign - Community distributors involved in the campaign.

PART 1: ANALYSIS OF DATA ON CHILDREN

8.1.1. CHARACTERISTICS OF THE HEAD OF HOUSEHOLD AND THE PERSON IN CHARGE OF THE CHILD

The analysis of the characteristics of the surveyed population constitutes an important means because it makes it possible to know it and to find elements of explanation of certain factors which could have an influence on the coverage of vitamin A supplementation. This is why, information on the head of household and the person in charge of the child was collected. It's about :

- ÿ sex;
- ÿ the age presented in the form of an age class in the tables;
- ÿ the level of school education;
- ÿ main economic activity.

According to the results of the analyzes (Table M.1.), male dominance as head of household no longer needs to be demonstrated. Overall 83% of the heads of households interviewed were men against 17% women. The gap is even more striking in rural areas (87% CM men against 13% women). In urban areas, the proportion of male household heads is 76% against 24% of women.

The distribution of heads of household by age group shows an increasing trend of the curve up to 44 years old before decreasing to almost 10% for CMs aged 45 to 49 as a whole. This pattern is observed in both rural and urban areas. The highest proportion of household heads was observed among those aged between 40 and 44 years. It is 39% also overall
only for each place of residence.

As for the analysis of the level of education of the CMs, the results showed that much effort still remains to be made to achieve the objectives of the program of education for all. Overall nearly 45% of household heads have no level of education. The overall level hides significant disparities between rural and urban areas. In rural areas, more than half (51%) of household CMs surveyed have no level of education, while in urban areas, this proportion is 34%. On the other hand, for the Koranic level, the proportion is higher in rural areas (17%) than in urban areas (9%).

The analysis of the economic activity also of the CMs was carried out because it can have an impact on the health of the child if especially the CM is also the person in charge of the child. The analysis by place of residence shows that the activities of the heads of households vary from one place to another. In rural areas, the main activity is agriculture, followed by liberal activities and trade. These activities are practiced respectively by 49%; 21% and 13% of surveyed CMs. In urban areas, the largest proportions of CMs exercising an activity were recorded in the liberal domain, commerce and the public sector. These activities are practiced respectively by 30%; 25% and 10% of surveyed CMs.

Table M.1. : Breakdown (in %) of heads of households who participated in the survey by place of residence according to their characteristics

Features of CM		Place of residence					
		Rural		Urban		Together	
			%	n %	86.6%	not	%
Gender of Head of Household	Male	No.	405 76.3%	1232 13.4%	126 23.7%	254	82.9%
	Feminine	827 128	0.3% 0.4%	1.6% 13	2.2% 2	15	17.1%
Age class of CM	Under 20	3	142 11.3%	58 10.9%	3	5	0.3%
	20 to 24	15	44 8.3%	146			1.8%
	25 to 29	57	4.0% 30 5.6%				5.5%
	30 to 34	86	13.3% 139				9.5%
	35 to 39	108	16.8% 48 9.0%				11.1%
	40 to 44	375	13.2% 130	24.5% 256	48.8% 11	2.2%	38.7%
	45 to 49	102	478 4.0% 37				9.8%
	50 to 54	75	0.9% 12 2.3%			107	7.2%
	55 to 59	39				55	3.7%
	60 to 64	42					5.2%
	65 to 69	17					2.5%
	70 and over	39					4.6%
Educational level of the head of household	Unschooled	488					45.0%
	Primary	135					13.8%
	Secondary	127					17.9%
	Superior	32					7.8%
	Literate	13					1.4%
	Koranic school	161					14.0%
Main activity of head of household	Public Sector Officer	32					6.2%
	Private Sector Agent	21					4.9%
	Trader	126					17.2%
	Farmer	466					32.1%
	housewife (housewife)	39					5.1%
	Craftsman/liberal activity	198					24.0%
	Unemployed/Unemployed	21					3.1%
	Retirement	9 8					1.4%
	Pupil/Student						0.8%
	Other specify	37				76	5.1%

In addition to information on heads of households, information on caregivers was also collected.

The gender distribution of caregivers shows that overall 57% were women compared to 43% men. The gap between women and men is greater in urban areas. In this zone, 61% of the persons in charge of the children are women whereas in rural areas, this proportion was 55%.

As for the distribution by age of the persons in charge of the children, we note that in general, 3% of the persons in charge of the children were under 20 years old at the time of the survey.
This proportion is 3% in rural areas and 1% in urban areas. This could show slightly earlier maternity in rural areas. The highest proportions were recorded between 20 and 39 years old. This age group represents more than half of the caregivers interviewed (69%). The proportion of persons in charge of children between the ages of 20 and 39 is 69% in rural areas and 68% in urban areas.

With regard to the level of education, people with no level of education affect caregivers even more than heads of households. Among the former, overall, more than half (54%) have no level of education. This proportion is 61% in rural areas and 42% in urban areas. Those with a primary level are 13% in rural areas and nearly 14% in urban areas. As with heads of households, the proportion of people in charge of children with a Koranic level is higher in rural areas than in urban areas.

As for the heads of household, the activities practiced depend on the place of residence. In rural areas and for people in charge of children, agriculture represents the main activity carried out (37%) and housewives occupy second place (25%). In urban areas, traders occupy the largest proportion (29%) followed by housewives (28%) and those who exercise liberal activities (23%).

Table M.2. : Breakdown (in %) of caregivers who participated in the survey by place of residence according to their characteristics

Characteristics of the caregiver		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Gender of Caregiver Male		429	44.9%	206	38.8%	635	42.7%
	Feminine	527	55.1%	325	61.2%	851	57.3%
Caregiver age group	Under 20	32	3.4%	7	1.3%	39	2.6%
	20 to 24	108	11.3%	55	10.3%	163	11.0%
	25 to 29	132	13.8%	73	13.7%	205	13.8%
	30 to 34	103	10.8%	82	15.3%	184	12.4%
	35 to 39	317	33.2%	152	28.5%	469	31.5%
	40 to 44	73	7.7%	49	9.1%	122	8.2%
	45 to 49	59	6.2%	21	3.9%	80	5.4%
	50 to 54	49	5.1%	25	4.7%	74	5.0%
	55 to 59	23	2.4%	14	2.6%	37	2.5%
	60 to 64	26	2.7%	21	3.9%	46	3.1%
	65 to 69	13	1.3%	13	2.4%	26	1.7%
	70 years and over	21	2.2%	22	4.2%	43	2.9%
Educational level of the person in charge of the child	Unschooled	581	60.8%	223	42.0%	804	54.1%
	Primary	127	13.3%	72	13.6%	199	13.4%
	Secondary	90	9.4%	137	25.9%	227	15.3%
	Superior	14	1.5%	64	12.1%	78	5.3%
	Literate	9	0.9%	9	1.8%	18	1.2%
	Koranic school	135	14.1%	24	4.6%	159	10.7%
Main activity of the person in charge of the child	Public Sector Officer	18	1.9%	47	8.9%	65	4.4%
	Private Sector Agent	9	0.9%	31	5.9%	40	2.7%
	Trader	132	13.8%	154	29.1%	287	19.3%
	Farmer	349	36.6%	9	1.8%	359	24.1%
	housewife (housewife)	236	24.7%	121	22.8%	357	24.0%

	Craftsman/liberal activity	162	16.9%	121	22.8%	283	19.0%	
	Unemployed/Unemployed	15	1.6%	9	1.8%	25	1.7%	
	Retirement	5	0.5%	9	1.6%	14	0.9%	
	Pupil/Student	6	0.7%	7	1.3%	14	0.9%	
	Other specify	22	2.3%	21	4.0%	43	2.9%	

8.1.2. ACCESS TO HEALTH SERVICES

Accessibility to health services was measured through the place frequented by household members to obtain medical care. The results show that health facilities are the places most frequented by households to receive care. In both rural and urban areas, almost all households go to health facilities for health care. About 1% go directly to pharmacies, traditional healers, street vendors or others for health care.

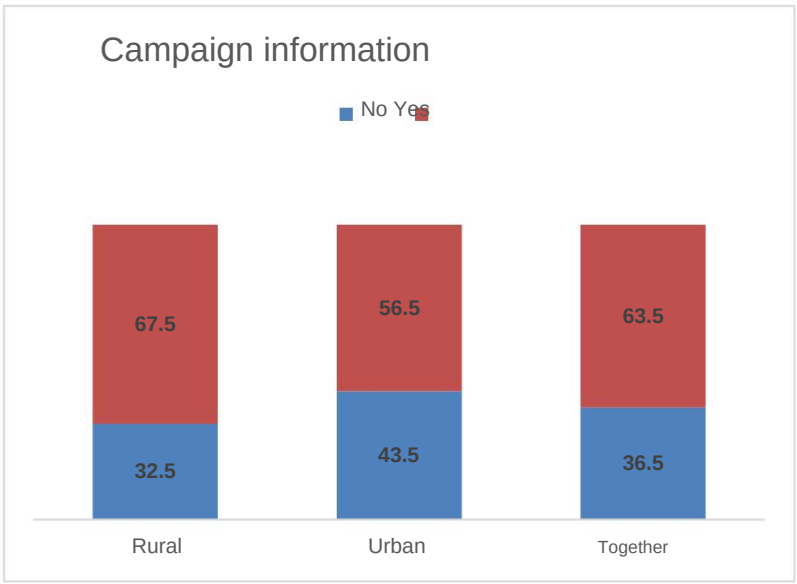
In addition, the analyzes also showed that the main service for which the people in charge of the children bring them to the structures remains treatment in the event of illness. According to the results, nearly 94% of respondents said that it is for cases of illness that they bring their children to health facilities. These proportions are 96% in rural areas and 91% in urban areas. After cases of illness, comes the vaccination of children. It was mentioned by 58% of respondents overall. Vaccination more requested in urban areas (64%) than in rural areas (52%).

Table M.3: Distribution (in %) of respondents according to the place frequented by members of the household to benefit from health care and the services for which children are taken to health facilities by place of residence.

Health services		Place of residence					
		Rural		Urban		Together	
		NOT	%	not	%	not	%
Place frequented by household members for care	Sanitary structure 946		98.90%	526	0.00% 99.20%	1472	99.00%
	Pharmacy	0	0.40%	0.30% 1	0.30%	1	0.10%
	Traditional healer	4	0.40%	48	2% 4	26	0.30% 0.40% 5
	street vendor 3		51.8%	759	1191	0	0.00% 0.20% 3
	Other	4	94.3%	1047	72	1	0.30% 0.40% 5
Vaccination	Nope	609	5.7%	138	1189		35.9% 1035 42.3%
	Yes	654	94.1%	74	5 .9%		64.1% 1413 57.7%
Vitamin A supplementation	Nope	4.4%	1208	95.6%	1083	1263	88.4% 2238 91.4%
	Yes	100.0%	1179	0	0.0%		11.6% 210 8.6%
Followed of the growth (weighing)	Nope				991		83.6% 2180 89.1%
	Yes				194		16.4% 268 10.9%
Sickness	Nope	55			102		8.6% 6.4% 157
	Yes						91.4% 2291 93.6%
Other	Nope						99.5% 2442 99.8%
	Yes				6		0.5% 6 0.2%

8.1.3. CAMPAIGN COMMUNICATION STRATEGY

Figure M.1: Informing about the campaign



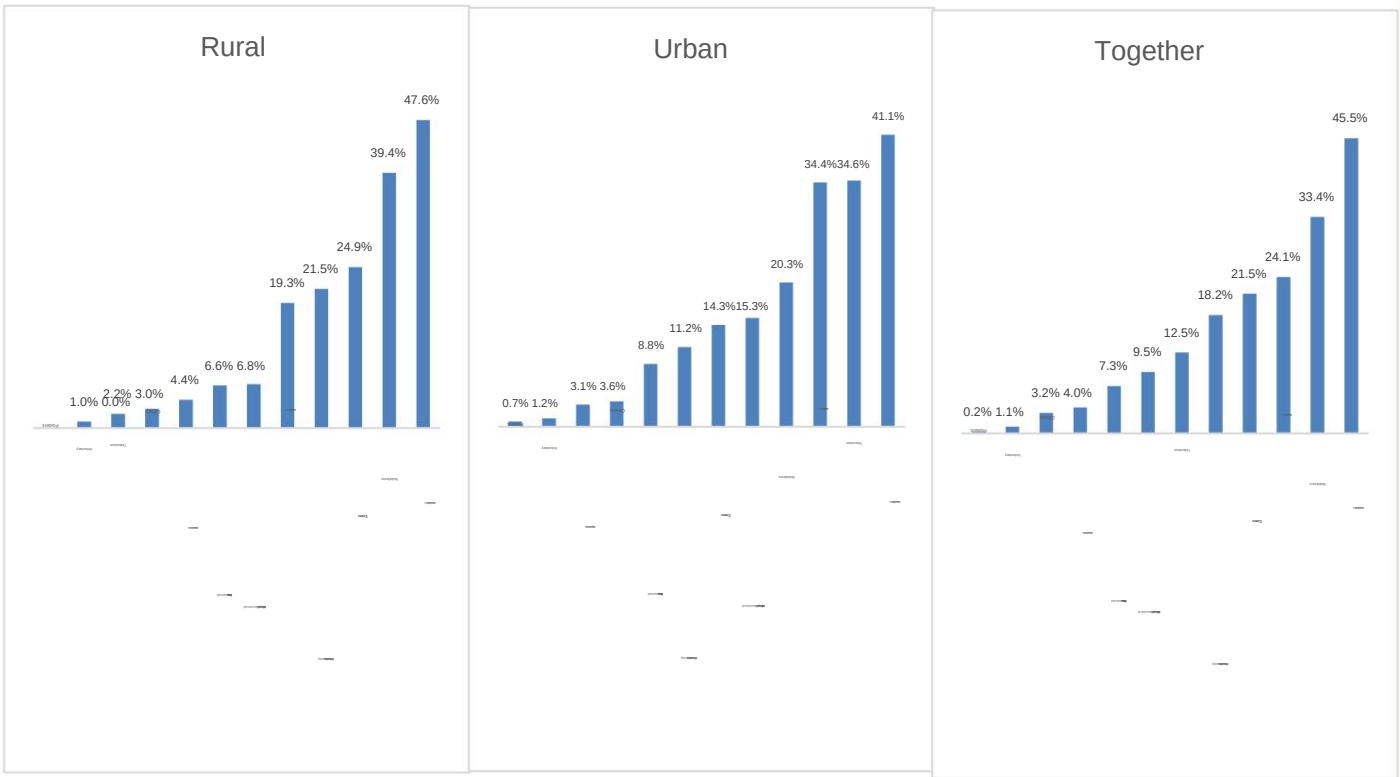
Before the campaign, arrangements are often made to inform the population of the campaign. For this, several communication and information channels are used in order to reach all localities and the maximum number of people. During these releases, the emphasis is on the period of the campaign, the nature of the product distributed and the target population.

To assess the proportion of people affected by the communication strategy used, the question of being informed before the campaign was asked to respondents. According to the results of the analysis of this question, nearly 64% overall confirmed that they had been informed before the start of the campaign. These proportions are 68% and 57% respectively in rural and urban areas (see graph M1).

As for the sources of information through which these people heard about the campaign, the first source mentioned in urban and rural areas as well as for the whole, is the health personnel. It was mentioned by 45% of respondents (41% in urban areas and 48% in rural areas).

The detailed analysis by area of residence shows that in rural areas, social mobilizers, town criers, distributors and radio stations come after health personnel. In urban areas, after health personnel, television, radio and mobilizers are the most important sources (see graph M2).

Graph M.2: Source of information by place of residence



As for the source of information on the vitamin, caregivers have more confidence in health personnel and community workers overall, as shown in Table M.4. By place of residence, television is the second most reliable source of information, while in rural areas, community workers are the most important source after health workers.

Table M.4: Distribution of caregivers (in %) having been informed or not by sources information according to place of residence.

Source of information are you most confident about your children's health	Place of residence					
	Rural		Urban		Together	
	n	%	n	%	n	%
Community Agent	229	23.9%	26	5.0%	255	17.2%
health worker	555	58.1%	342	64.4%	897	60.3%
Television	6	0.7%	77	14.4%	83	5.6%
Radio	72	7.5%	52	9.8%	124	8.4%
Town Crier/Social Mobilizer	80	8.3%	21	4.0%	101	6.8%
Play/Search	0	0.0%	0	0.0%	0	0.0%
Other	14	1.5%	12	2.3%	26	1.8%

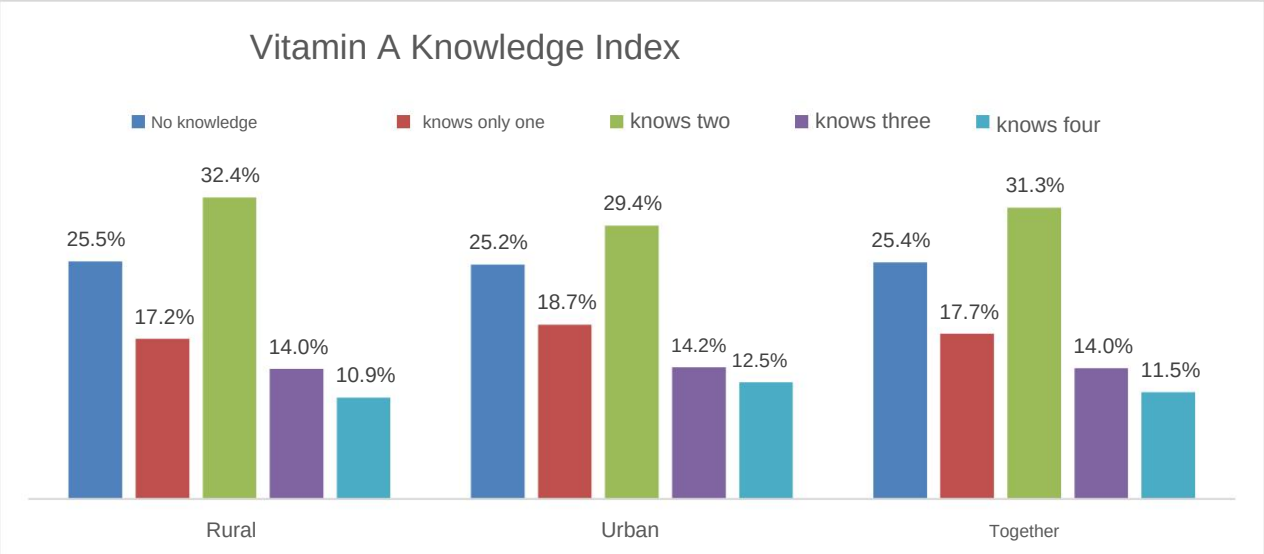
8.1.4. LEVEL OF KNOWLEDGE OF VITAMIN A

The commitment of households to have their children supplemented could depend on their knowledge of vitamin A. This knowledge involves knowing the name of the product administered (Vitamin A) during the campaign, the age of first intake of these products, the frequency of vitamin A supplementation per year and its importance. This is why an index of knowledge of vitamin A was calculated. This indicator takes into account several indicators related to vitamin A.

According to this index, in rural areas, in urban areas and overall, one in four (1/4) caregivers have no knowledge of vitamin A.

Although 25% of caregivers have no knowledge of vitamin A in both urban and rural areas, this product is better known in urban areas because nearly 13% of caregivers have a good knowledge vitamin A. This proportion is 11% in rural areas (see graph M3.).

Graph M.3: Knowledge index of vitamin A by place of residence and for the whole



8.1.5. PERCEPTION ON THE CAMPAIGN AND SUPPLEMENTATION IN VITAMIN A.

In addition to knowledge of the product administered during the distribution campaigns, the population's perception of the campaign and the product distributed can have a significant impact on the coverage rate. This is why these two questions were put to the persons in charge of the child. As for the vitamin A supplementation campaign, overall nearly 88% of caregivers think the campaign is good or very good (Table M5).

The analysis by area of residence shows that the campaign is widely appreciated regardless of the area of residence considered. According to the Khi2 test carried out at the 5% threshold, the difference in terms of appreciation observed between these two best is not significant (P=0.080).

Moreover, the second phase of the evaluation of perception concerns vitamin A itself. According to the test results, nearly 87% of caregivers think vitamin A is good or very good. These proportions are respectively 87% and 88% for urban and rural areas. But it is important to mention that a not insignificant proportion of caregivers are not pronounced. It is 9% for the whole and for the places of residence. Also at this level, the difference observed between the two areas of residence is not significant at the 5% level (P=0.038).

Table M.5: Breakdown of persons in charge of children (in %) by perception on the campaign and on vitamin A according to place of residence.

Perceptions on the campaign and vitamin A supplementation		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
What do you think of the distribution campaigns often organized by the Government and its partners?	Very good	339	35.5%	162	30.5%	501	33.7%
	Good	506	53.0%	297	56.1%	804	54.1%
	Acceptable	15	1.6%	19	3.5%	34	2.3%
	Neutral	90	9.4%	49	9.2%	139	9.3%
	Not good	5	0.5%	4	0.7%	9	0.6%
	Not at all good	0	0.0%	1	0.1%	1	0.0%
What do you think of the vitamin A supplementation campaign in particular.?	Very good	358	37.5%	179	33.8%	538	36.2%
	Good	477	49.9%	279	52.6%	756	50.8%
	Acceptable	12	1.2%	18	3.4%	29	2.0%
	Neutral	105	11.0%	51	9.7%	157	10.6%
	Not good	3	0.3%	3	0.5%	5	0.4%
	Not at all good	1	0.1%	0	0.0%	1	0.1%

8.1.6. DECISION TO HAVE A CHILD BENEFIT FROM SVA.

The decision to give a child vitamin A can be made at several levels. It can be influenced by direct relatives, neighbors or other people on the one hand and on the other hand the taking into account of the wife's opinion after the husband's decision-making. For this section, the questions were asked to all the persons in charge of the children without taking into account the status of the child (child

supplemented or not) because it is a question of evaluating the perceptions, the decision-making, the practices on the supplementation of the children in a general way.

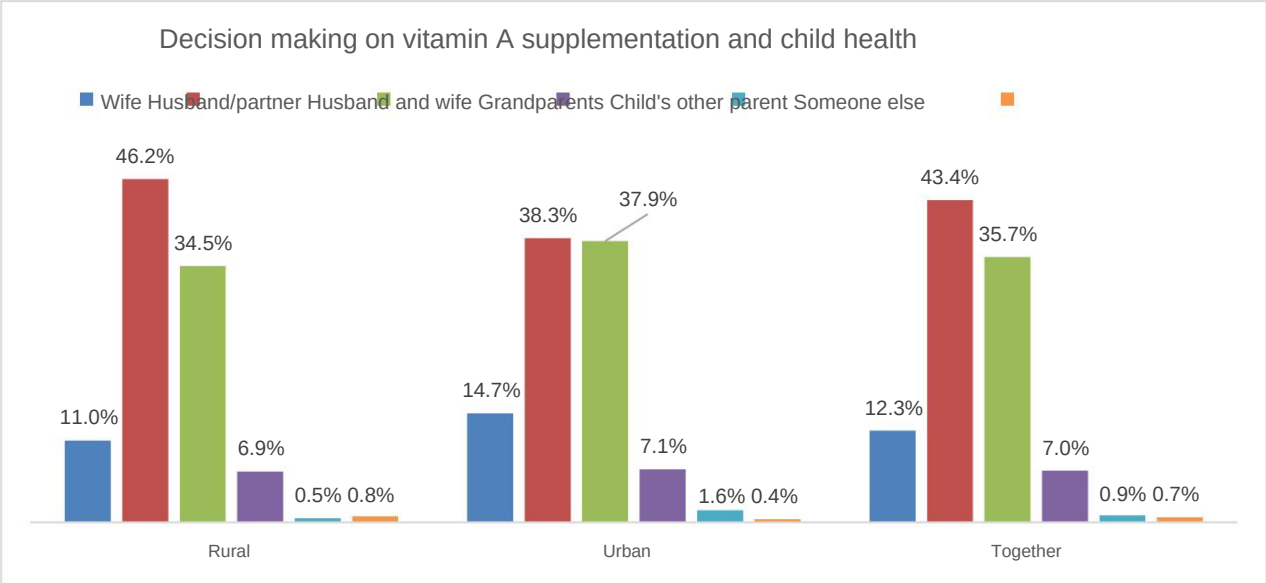
8.1.6.1. Person who makes the decision for the supplementation of children in vitamin A

Decision-making for children's health as well as for other aspects of life, the decision is often taken by the husband or partner as shown by the results in the table below.

According to Figure M.4, about 43% of caregivers confirmed that the husband or partner makes the decision and 36% confirmed that the decision is jointly made with the husband or partner. Only 12% of caregivers said that it is the woman who makes the decision to have the child supplemented with vitamin A. This proportion is 7% for those who said that it is the adults - parents who make the decision.

The analysis by area of residence shows that decision-making reserved exclusively for the husband or partner is more accentuated in rural areas (46% against 38% in urban areas). On the other hand, dialogue between couples or decision-making by women is more accentuated in urban areas.

Figure M.4 Distribution of caregivers by level of decision-making on vitamin A supplementation and child health.



8.1.6.2. Opinion of the wife after the decision of the husband

Making the decision about vitamin A supplementation and children's health is one thing, but giving feedback after a husband's decision has been made shows the collaboration between husband and wife on children's health.

The results in Figure M.5 show that overall, nearly 75% of caregivers confirmed that they can give their opinion after the husband's decision has been made. This proportion is 78% in urban areas and 74% in rural areas.

Graph M.5: Consideration of the wife's opinion after the husband's decision

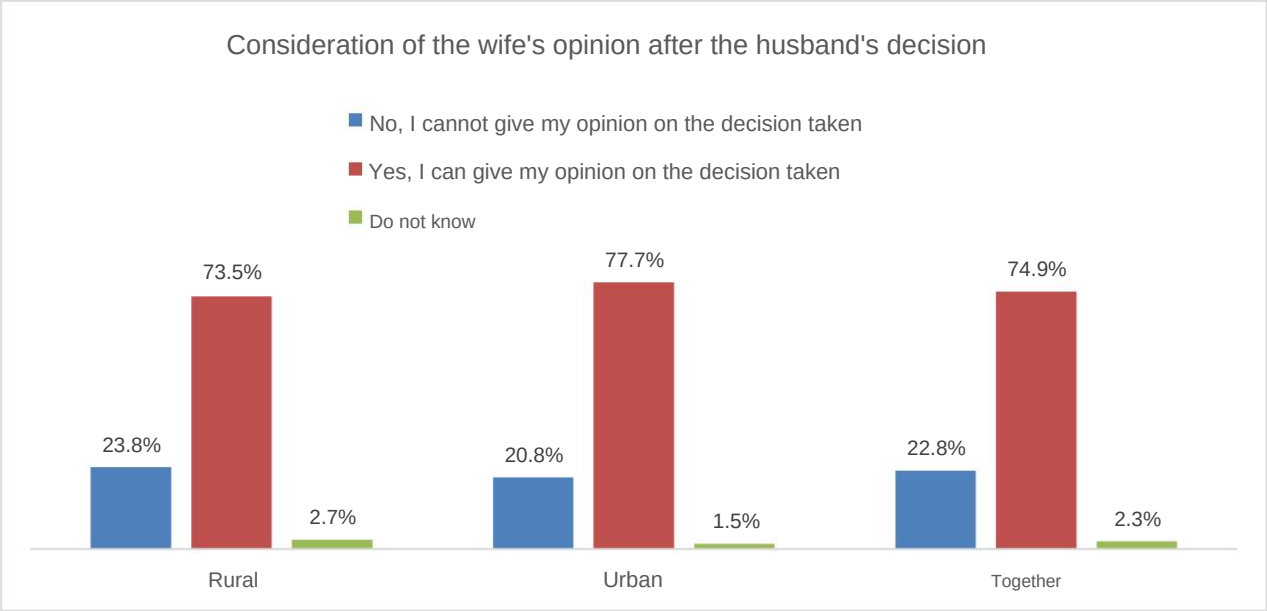


Table M.6: Distribution of persons in charge of children (in %) by level of decision-making on vitamin A supplementation and children's health by place of residence.

Decision making on vitamin A supplementation and child health		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Who usually makes the decision whether or not your child benefits from VAS?	Women	105	11.0%	78	14.7%	183	12.3%
	husband/partner	442	46.2%	203	38.3%	645	43.4%
	Husband and wife/partner jointly	330	34.5%	201	37.9%	531	35.7%
	Grandparents	66	6.9%	38	7.1%	103	7.0%
	Child's other parent	5	0.5%	9	1.6%	14	0.9%
	Someone else to specify	8	0.8%	2	0.4%	10	0.7%
When your husband/partner/someone else makes the decision whether or not your child will benefit from VAS, are you able to give your opinion on the decision taken?	No, I cannot give my opinion on the decision taken	149	23.8%	69	20.8%	218	22.8%
	Yes, I can give my opinion on the decision taken	460	73.5%	256	77.7%	716	74.9%
	Do not know	17	2.7%	5	1.5%	22	2.3%
Who decides on the health of children	Husband	567	59.3%	270	50.8%	836	56.3%
	Marry	39	4.0%	38	7.1%	76	5.1%
	Both	279	29.2%	177	33.3%	455	30.6%
	Grandparents	59	6.2%	37	7.0%	96	6.5%
	Husband's other relative	1	0.1%	4	0.8%	6	0.4%
	Other relative of the woman	3	0.3%	3	0.5%	5	0.4%
	Other	9	0.9%	2	0.4%	11	0.7%

8.1.7. QUALITY OF VITAMIN A ADMINISTRATION ACTIVITIES.

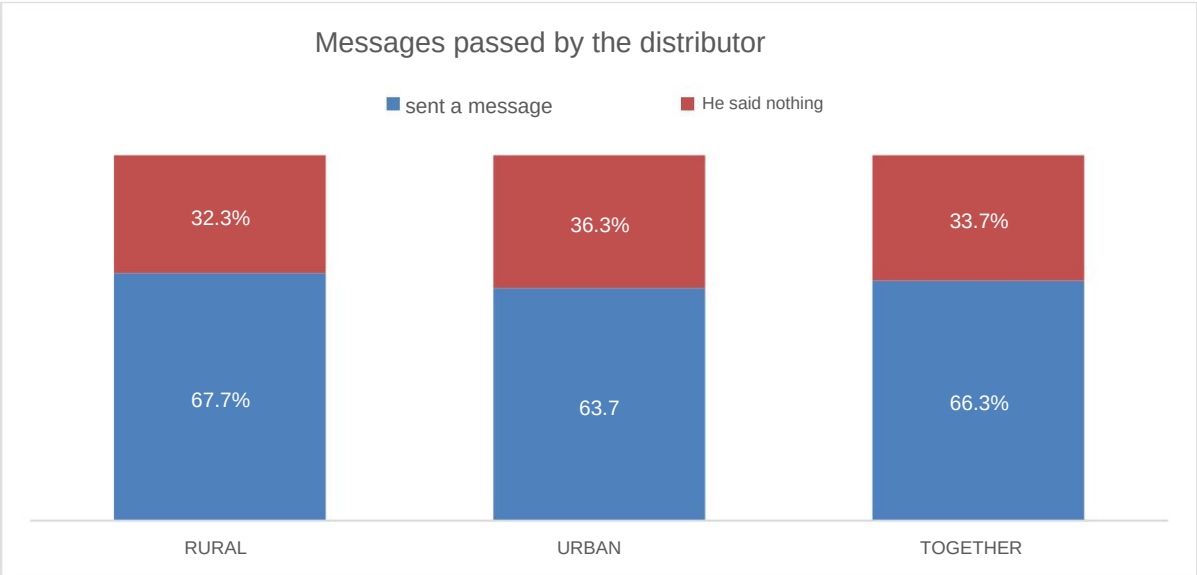
The quality of the vitamin A supplementation campaign was measured through awareness and information messages on the benefits of vitamin A and additional services offered during the campaign.

8.1.7.1. Messages conveyed by the distributor during supplementation.

For this campaign, nearly 66% of caregivers said they received a message from distributors about supplementation during the campaign, compared to 34% who said they received no message. The proportion of caregivers who claimed to have received a message from distributors is 64% in urban areas and 68% in rural areas.

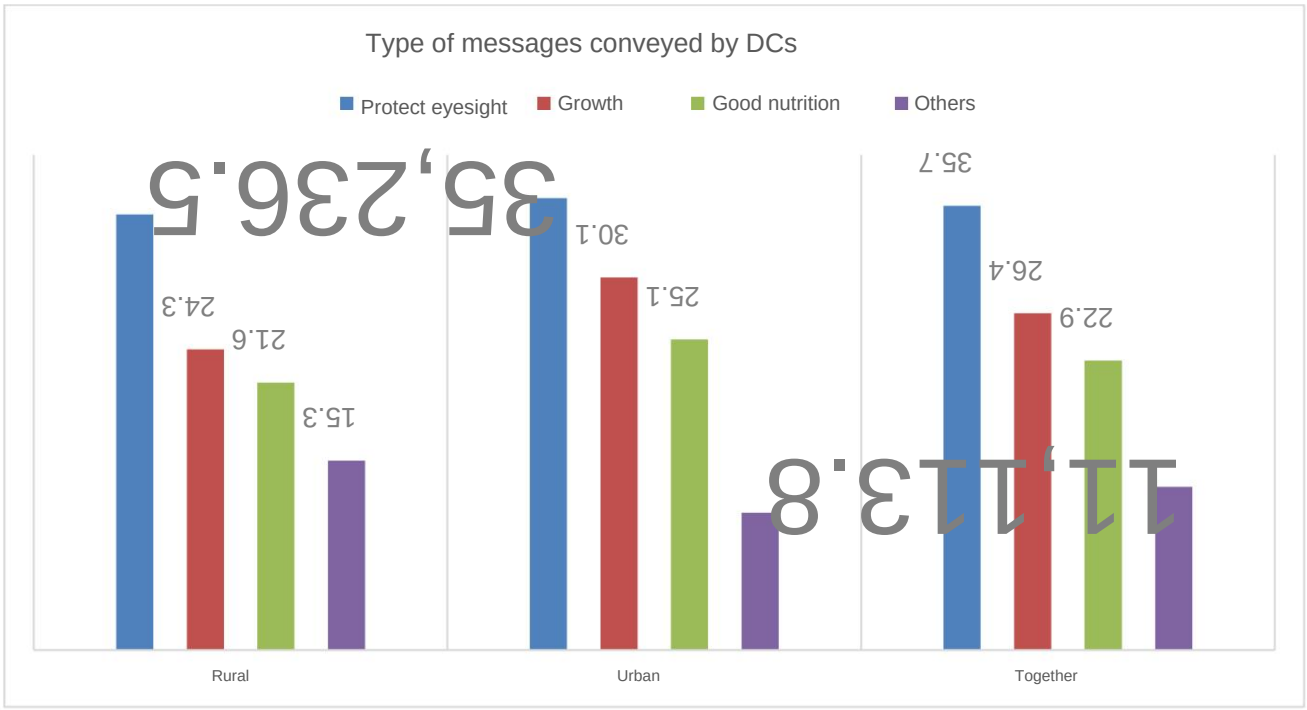
Community distributors are among the most cited sources of information in both rural and urban areas. But specifically, they are the second most credible source in rural areas. The message conveyed can thus have a significant impact on the commitment of households to have their children supplemented, but also to go to health facilities to benefit from the other services offered by health.

Graph M.6: Breakdown of distributors who did or did not convey a message on health services during the campaign



Concerning the nature of the messages passed, according to the people surveyed, the protection of sight is the most conveyed message regardless of the place of residence. It was mentioned by nearly 36% of respondents overall. Growth and good nutrition were also mentioned respectively by 26% and 23% of caregivers surveyed.

Graph M.7 : Breakdown of distributors by type of message conveyed during the campaign



PART 2: ANALYSIS OF DATA ON CHILDREN

This section concerns children from 6 to 59 months. It deals with the characteristics of these children, their vitamin A supplementation, the place of supplementation, the reasons for non-supplementation for those who have not been supplemented, their registration in the civil registry.

8.2.1. Characteristics of the children surveyed

As with households, knowing the characteristics of the children surveyed makes it possible to classify them according to sex, age group and relationship to the respondent.

8.2.1.1. Average number of children surveyed per household

Overall, 1,486 households responded to the questions, including 744 in rural areas and 742 in urban areas. Overall, 2,448 children were affected, including 1,263 children in rural areas and 1,185 children in urban areas. On average, in the rural area 1.69 children and in the urban area 1.59 children were surveyed per eligible household.

8.2.1.1. Relationship, gender and age group of children

To take into account the relationship between the child and the caregiver. According to the results of the analyses, 56% of the people interviewed are the biological mothers and 17% are the biological fathers. of the child surveyed. Whatever the place of residence, the proportion of mothers is higher. It is 55% in rural areas and 58% in urban areas.

Overall, the analysis by sex of the children surveyed shows that nearly 53% were boys against 47% girls. Regardless of place of residence, the proportion of boys is higher than that of girls. By area of residence, the proportion of girls was 49% in urban areas and 46% in rural areas.

The distribution of children surveyed by class revealed that more children aged 12 to 59 months in both rural and urban areas were surveyed. Their proportion is 90% against 10% of children aged 6 to 11 months overall.

Table E.1: Distribution of children (in %) by characteristic according to place of residence.

Characteristics of children		Place of residence					
		Rural		Urban		Together	
		not	%	not	%	not	%
Relationship between the interviewee and the child	Dad	310	19.1%	76	8.9%	385	15.6%
	Mother	890	54.9%	494	58.3%	1385	56.1%
	Uncle	36	2.2%	11	1.3%	47	1.9%
	Aunt	104	6.4%	79	9.4%	183	7.4%
	Tutor	0	0.0%	4	0.5%	4	0.2%
	Tutor	4	0.2%	5	0.6%	9	0.4%
	Grandfather	69	4.3%	38	4.5%	107	4.3%
	Grandmother	161	9.9%	118	13.9%	279	11.3%
	Servant		0.0%		0.0%		0.0%
	Other	0	3.0%	0	2.6%	0	2.9%
Child's gender	Male	49	54.0%	22	51.1%	71	53.0%
	Feminine	876 747	46.0%	433 415	48.9%	1309 1161	47.0%
Class child's age	6 to 11 months	161	9, 9%	77	9, 0%	237	9.6%
	12 to 59 months	1462	90.1%	771	91.0%	2233	90.4%

8.2.1.2. Knowledge of the child's date of birth and the source of information

The dose of vitamin A depends on the age of the child. This is why the question on the knowledge of the date of birth of the children and its source of verification, were asked for each child to the person who takes care of him.

According to analyzes of this question, overall 31% of people know the actual date of birth of their child, compared to 69% of mothers or caregivers, who said they did not know.
the date of birth of their child.

To verify the date of birth of the child, the most used source is the declaration of the parents. Although during the campaign, the registration of children in the civil registry was an activity in its own right, the use of the birth certificate as a source of information is still low. On the whole 21% of the people in charge of the child presented their extract or the birth certificate of the child. In rural areas, this proportion was 17% and 26% in urban areas. On the other hand, health records were used more in rural areas than in urban areas as a source of verification of the child's date of birth.

In the absence of documents attesting to the child's date of birth, the declarations of the child's parents were taken into account.

Table E.2: Distribution of caregivers (in %) knowing or not knowing the date of birth of the child by source of information according to place of residence.

Knowledge of the child's date of birth and source of information		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Do you know the date of birth of the child	Nope	1198	73.8%	511	60.3%	1708	69.1%
	Yes	425	26.2%	337	39.7%	762	30.9%
Source of birth date information	Health book	90	21.1%	47	14.0%	137	18.0%
	Birth certificate	73	17.2%	89	26.3%	162	21.2%
	Event calendar	3	0.6%	2	0.6%	5	0.6%
	Declaration of the parents of the child	260	61.0%	197	58.6%	457	60.0%
	village notebook	0	0.0%	0	0.0%	0	0.0%
	Other specify	0	0.0%	1	0.4%	1	0.2%

8.2.2. Vitamin A coverage.

For the vitamin A supplementation campaign, the main objective remains the supplementation of all children from 6 to 59 months with vitamin A. Therefore, planning activities are carried out.

After the campaign, an independent coverage assessment survey is organized to estimate the coverage rate against the campaign target. This is to determine the number of children who received vitamin A during the campaign compared to the number of children subjected to the evaluation.

8.2.2.1. Vitamin A coverage according to place of residence.

According to the results of the analyses, the coverage of vitamin A supplementation for the whole is 86%. This coverage could vary between 84% and 87% obtained from the confidence interval calculated at the 95% threshold.

By place of residence, the highest coverage was recorded in rural areas. It is 88%. The actual coverage could be between 87% and 90%. In urban areas, the recorded coverage is 82% which could also vary between 80% and 85%.

It should be added that overall 2% of respondents do not know whether or not the child had received vitamin A. This proportion of DKs is higher in urban areas (2%) and lower in rural areas (1%). The difference in vitamin A supplementation coverage observed between rural and urban areas is significantly at the 5% threshold (P=0.000) according to the chi-square test performed.

Table E.3: Distribution by coverage of vitamin A supplementation for children aged 6 to 59 months depending on place of residence.

Place of residence	Additional child	%	95% confidence interval	
			Inferior	Superior
Rural	Nope	10.6	9.1	12.4
	Yes	**88.3**	**86.5**	**89.9**
	DK	1.1	0.6	1.7
	Total children surveyed		**1263**	
Urban	Nope	15.7	13.5	17.8
	Yes	**82.3**	**80.2**	**84.6**
	DK	2.0	1.2	2.9
	Total children surveyed		**1185**	
Together	Nope	13.1	11.7	14.5
	Yes	**86.2**	**83.9**	**86.8**
	DK	1.6	1.1	2.0
	Total children surveyed		**2448**	

8.2.2.2. Place of administration of vitamin A

As mentioned during the planning and training of the distributor agents, the door-to-door strategy was the one adopted.
The question on the place of vitamin A supplementation was only asked of caregivers who said that the child had been supplemented.

As recommended during the campaign, the results of the analysis of the question on the place of supplementation show that overall 90% of the children had been supplemented at home.
The highest proportion of children supplemented at home was recorded in urban areas.
In this zone, 94% of the children supplemented were supplemented. This proportion is 88% in rural areas. In the latter, the other children supplemented were either at the DC's home
(2%), either at the health center (4%) or even at school, in the courtyard of a place of worship (2%).

These high proportions of respondents who said that the children received supplements at home show compliance with the **door-to-door strategy** that had been recommended even though other children had received supplements outside their homes.

8.2.2.3. Reason for non-supplementation of vitamin A to the child.

The question on the child's lack of vitamin A supplementation was only asked of caregivers who confirmed that the child had not been supplemented.

For children who did not take the products, several reasons were mentioned. Among these reasons, the main one, both in rural and urban areas, was the lack of total geographical coverage **(distributing agents did not come)** of all localities (villages, neighborhoods, sectors). This lack of total geographic coverage thus deprives children living in unaffected localities from benefiting from the services provided during the campaign (vitamin A supplementation, screening for malnutrition, birth registration).

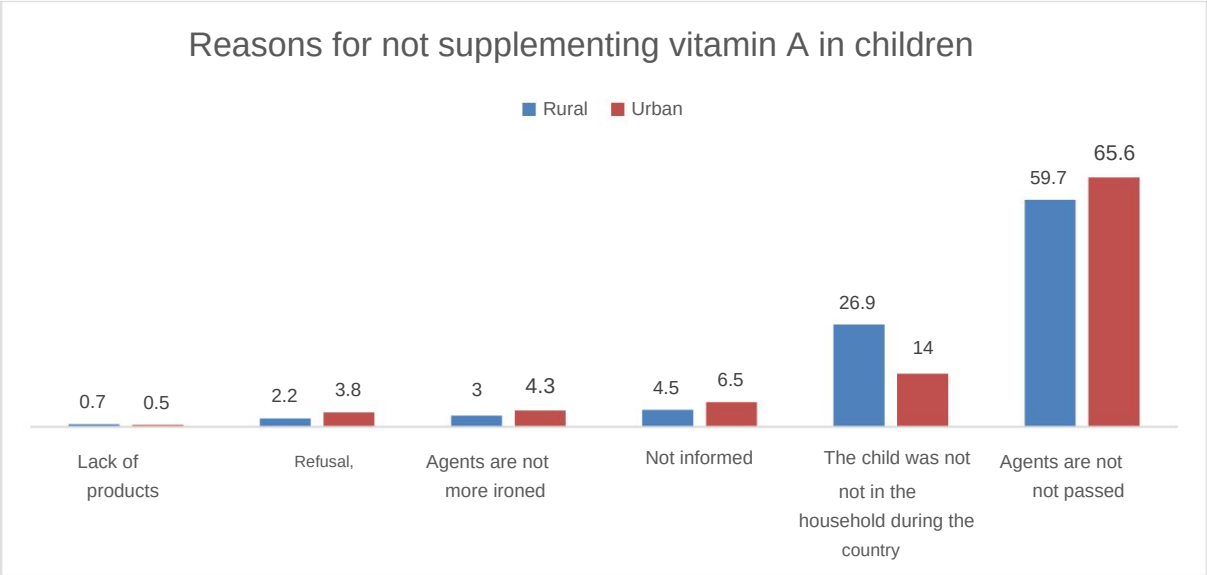
Overall, 62% of caregivers mentioned that CDDs did not come to their locality. The absence of the child at home (21%) during the visit of the community distributors is the second most mentioned reason, followed by the lack of information on the holding of the campaign.

As for the refusal to supplement the child, was reported by 3% of respondents. It is higher in urban areas (4%) than in rural areas (2%).

The detailed analyzes show that the trend observed at the global level is also that observed in both rural and urban areas, as shown in graph E.1.

Taking into account the reasons cited, the coverage rate could be improved by taking measures against, for example, the lack of total geographical coverage, the absence of children at home during the passage of CDs and by further emphasizing the campaigns of information before the campaign is held.

Figure E.1. : **Reasons for non-supplementation of vitamin A to children.**



Furthermore, the analyzes also showed that it is often the mother who accompanies the child for supplementation, as shown in table E4.

Table E.4. : Distribution of caregivers by place of supplementation and reasons of no supplementation depending on the place of residence.

Knowledge of the child's date of birth and source of information		Place of residence					
		Rural		Urban		Together	
		not	%	n	%	n	%
Place of vitamin A supplementation	here at home	1267	88.4%	656	94.1%	1923	90.3%
	At the DC's home	33	2.3%	1	0.2%	35	1.6%
	village health center	59	4.1%	14	1.9%	73	3.4%
	At the health center outside the village	6	0.4%	1	0.1%	7	0.3%
	School/ mosque/ church	3	0.2%	13	1.8%	15	0.7%
	Street/market	13	0.9%	6	0.8%	19	0.9%
	Other place in the village/district	32	2.2%	4	0.5%	36	1.7%
	Another place outside the village	5	0.4%	1	0.1%	6	0.3%
	Do not know	0	0.0%	0	0.0%	0	0.0%
	Other (explain, list	14	1.0%	3	0.4%	17	0.8%
Reason for not supplementing with vitamin A	The child was not in the household during the campaign	46	26.9%	19	14.0%	65	21.2%
	The agents did not come	103	59.7%	87	65.6%	190	62.3%
	Agents no longer ironed	5	3.0%	8	7	5.4%	12 4.0%
	Not informed	4	5%	0	9	6.5%	16 5.3%
	The child was sick	0	0.0%	4	0	0.0%	0 0.0%
	Refusal,	2	2%	1	5	3.8%	9 2.9%
	Lack of products	0	7%	0	0	0.0%	1 0.4%
	Fear of COVID-19	0	0.0%	0	0	0.0%	0 0.0%
	Non-compliance with barrier measures by agents	0	0.0%		0	0.0%	0 0.0%
	Don't know / don't remember	0	0.0%	5	1	0.5%	1 0.2%
	Other (explain, list	3	0%		6	4.3%	11 3.6%
Who was/accompanied the child to receive VAS during the most recent campaign?	The child's mother	123	74.4%	23	55.2%	146	70.6%
	The father of the child	12	7.0%	8	4	8.6%	15 7.3%
	The child's sister	4	7%	0	4	8.6%	11 5.4%
	The child's brother	0	0.0%	12	0	0.0%	0 0.0%
	The child's grandmother	7	0%	1	7	17.2%	19 9.0%
	The child's grandfather	0	8%	4		1.7%	2 1.0%
	Another woman in the family or a friend	2	3%	6	1	1	3.4% 5 2.6%
	Another relative or friend	3	9%		2	5.2%	9 4.1%

8.2.3. Vitamin A supplementation coverage and characteristics of the child.

The coverage according to the information related to the child, makes it possible to know the category of children most supplemented. This is why the coverage was calculated according to the age group of the child, his relationship with the respondent, the possession of his birth certificate.

Depending on the age group, nearly 86% of children aged 12 to 59 months received supplements. This proportion is 85% for children aged 6 to 11 months. But the significance test carried out at the 5% threshold shows that the difference in terms of coverage observed between these two age groups is not significant (P=0.543).

The analysis by sex of the child also shows that even if the coverage is higher among girls (86%) than among boys (85%), this difference is not significant (P=0.869).

The relationship determines the relationship between the child and the respondent. It can have an impact on the follow-up of the child. This is why the relationship was crossed with vitamin A supplementation during the past campaign. According to the results of the analyzes of this cross, the highest coverage was recorded among children who are with their biological parents (father or mother). Among these children 87% had been supplemented and the lowest coverage was observed among children
who live with another relative. Their coverage is 82%.
The different level of coverage observed between these children is quite significant at the 5% level (p=0.000).

Another form of follow-up of the child is its registration with the civil status services. Moreover, the highest coverage was recorded among children with a birth certificate or certificate (88% for those whose certificate was seen and 86% for those whose certificate exists but had not been presented to investigators). The coverage observed among children not registered in the civil registry was 85%. The difference in coverage observed between these different classes of children is quite significant at the 5% level (p=0.017).

Table E.5: Distribution of children (in %) by socio-demographic characteristics according to vitamin A supplementation coverage.

		Vitamin A Supplementation Coverage							Meaningful test (P-value)
		Nope		Yes		DK			
		n % 172		not	% n % Together				
Place of residence	Rural	10.6% 1433 88.3% 18 1.1% 133 15.7% 697 82.3%						1623	0.000
	Urban	17 2.0% 305 12.4% 2130 86.2% 35 1.4% 32 13, 4%						847	
	Total 6 to	201 84.6% 5 2.0% 273 12.2% 1929 86.4% 30 1.4%						2470	
Child's age group	11 months 12	305 12.4% 2130 86.2% 35 1.4% 163 12.4% 1126						237	0.543
	to 59 months	86, 0% 20 1.6% 142 12.3% 1004 86.5% 15 1.3% 188						2233	
	Together	10.6% 1554 87.8% 28 1.6% 104 16.9% 505 82.0% 7						2470	
Child's gender	Male	1, 1% 13 15.3% 71 83.9% 1 0.8% 305 12.4% 2130						1309	0.869
	Feminine	86.2% 35 1.4% 11 9.3% 103 90.1% 1 0.6% 181 11,						1161	
Recoded relationship	biological relationship	8% 1334 87.0% 19 1.2% 88 12.8% 587 85.7% 10						1770	0.000
	Other relatives	1.5%						616	
	Unrelated to the child							84	
	Together							2470	
Possession of a birth certificate/act	Yes, seen							114	0.017
	Yes not seen							1534	
	No, no birth certificate or act							685	
	Do not know	25 18.5% 106 77.4% 6 4.1%						137	

8.2.4. Vitamin A supplementation coverage for children and campaign information

The fact of being informed of the holding of the campaign and its period, allows those in charge of the children to plan in order to make the children benefit from the services rendered during the campaign because it seems to have a significant influence at the threshold of 5% on supplement coverage (p=0.000). According to Table E.6, overall nearly 96% of the children of respondents who were informed of the campaign were supplemented. This proportion is 67% for children whose parents had not been informed of the campaign.
The proportion of supplemented children whose parents had been informed of the campaign was 97% in rural areas and 94% in urban areas, as shown in Table E.6.

Table E.6: Distribution of caregivers of children (in %) having been informed of the campaign or not, by area of residence according to vitamin A supplementation coverage.

Place of residence	Informed of the holding of the mass campaign before its start	Vaccination coverage						P-value of the Chi-square test
		Nope		Yes		DK		
		n	%	n	%	not	%	
Rural	Nope	139	30.4%	303	66.5%	14	3.1%	0.000
	Yes	1129	96.8%	4	0.3%			
Urban	Nope	107	29.7%	242	66.9%	12	3.4%	0.000
	Yes	456	93.7%	5	1.0%			
Together	Nope	246	30.1%	545	66.7%	26	3.2%	0.000
	Yes	1585	95.9%	9	0.5%			

8.2.5. Vitamin A supplementation coverage and caregiver characteristics

Knowledge of the factors that have prevented caregivers from supplementing children can help avoid them for future campaigns. For the analyses, we did not take into account the characteristics of the person in charge of the child because they seem to have more influence on the life of the child.

8.2.5.1. Coverage of vitamin A supplementation for children and gender of the child's caregiver

As we can see from table E.7 in the appendix, the children followed by a man received more vitamin A supplements (88%) than those followed by the women (85%). But the fact of interviewing a man or a woman on the supplementation of the child in vitamin A or its, does not seem to have a significant influence at the threshold of 5% (p=0.227).

8.2.5.2. Vitamin A supplementation coverage of children and class age of the person in charge of the child

Moreover, taking care of a child is a practice that is acquired over time, which could be linked to the age of the person taking care of the children. But this experience does not mean that children will have the best blankets.

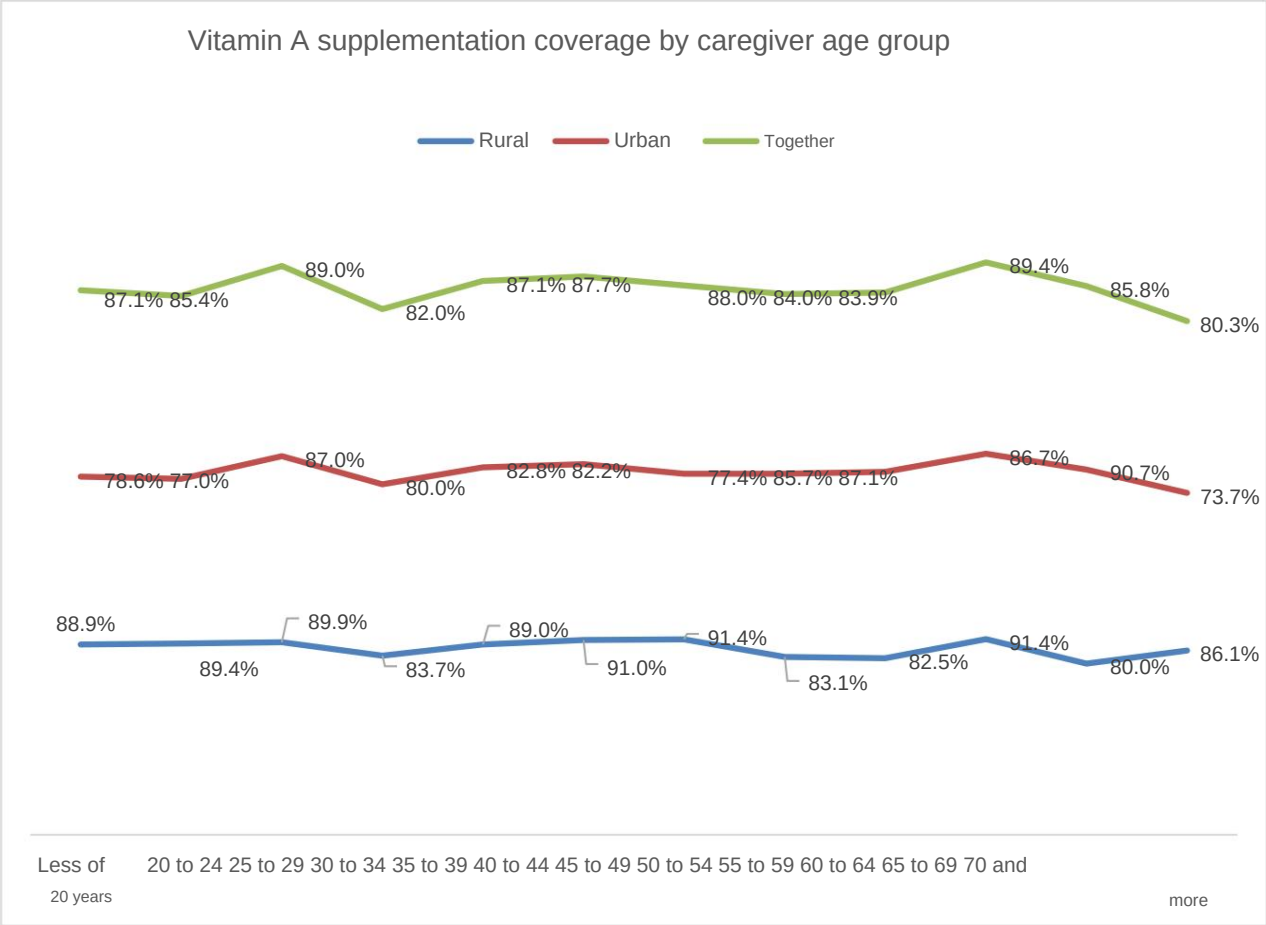
According to the graph below, the shape of the different curves is irregular. Which shows that the coverage of vitamin A supplementation varies according to the age group of the person

in charge of the child. The Chi-square test carried out for rural areas showed that the difference observed at the 5% threshold is significant (p=0.032%).

The same test carried out for the urban environment showed that these differences in coverage observed by age group of the person in charge of the child are not significant at the 5% level (p=0.361).

Graph E.2 shows the shape of the curves by place of residence.

Chart. E.2. Coverage of vitamin A supplementation by age group of caregivers children.



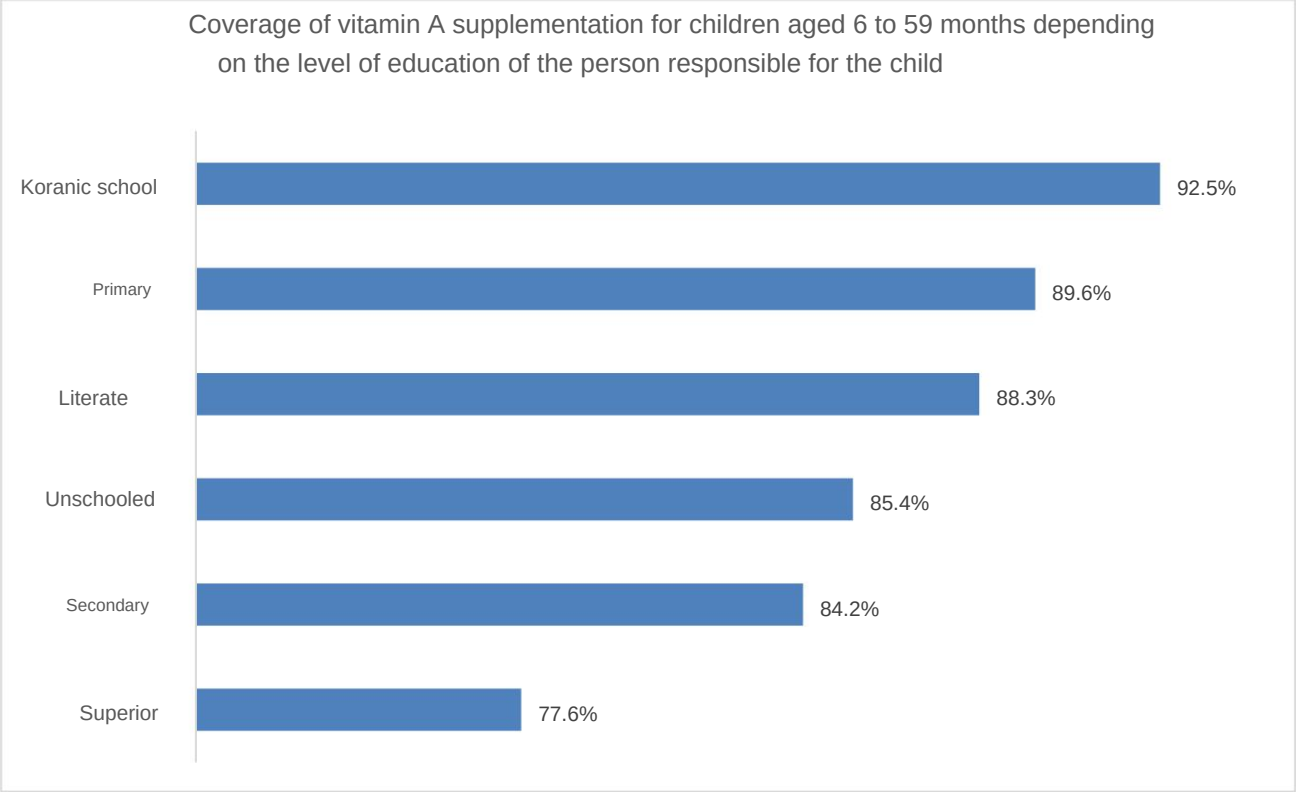
8.2.5.3. Vitamin A supplementation coverage of children and education level of caregiver

Reading and understanding the importance of a product goes through the level of instruction. The analysis of the level of education, especially of the person in charge of the child, can constitute a motivating factor for vitamin A supplementation is a child because he can have access to information on vitamin A through different channels, especially the Internet. But the level of education alone is not enough to motivate the child to supplement, as shown by the results of the analyzes in graph E.3.

According to these results, 93% and 90% of children of caregivers who attended Koranic schools and primary level, respectively, were supplemented. The lowest were recorded among the children of caregivers with secondary education or

superior. According to the results of the significance test (chi-square test), the difference in terms of supplementation coverage observed between the children of the different categories of level of education of the persons in charge of the children, is quite significant at the threshold of 5 % (p=0.000).

Graph E.3: Coverage of vitamin A supplementation for children aged 6 to 59 months according to the level of education of the caregiver



8.2.5.4. Children's vitamin A supplementation coverage and activity economic of the person in charge of the child

The economic activity of the person in charge of the child, seems to have a significant impact on the vitamin A supplementation of children from 6 to 59 months at the threshold of 5% (p=0.000). It is important to mention that the highest coverages were recorded among children whose parents are students (95%) or who are retired (90%). The lowest coverage was recorded among the children of caregivers working in the private sector.
It is 80% for each of these categories.

8.2.5.5. Vitamin A supplementation coverage of children and caregiver's household standard of living

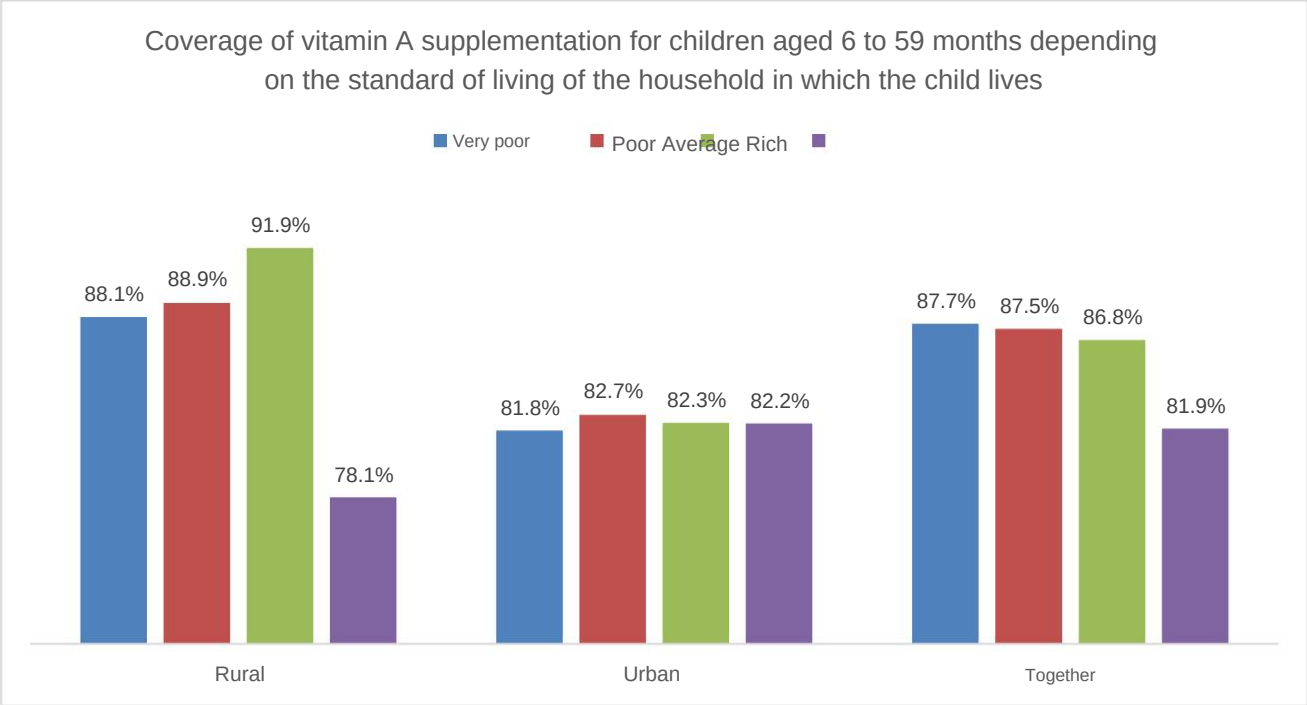
As a reminder, the household's standard of living was calculated from the goods it owns and its living comfort. On the whole, the more the standard of living of the household improves, the more the coverage drops, certainly because of the difficulties of access to children.

According to Figure E.4, nearly 88% of the campaign's target children living in very poor and poor households were supplemented. This proportion is 87% in average households and 82% in rich households.

The analysis according to place of residence shows different situations. In rural areas, for example, the children with the highest supplementation rate were recorded among those living in medium-sized households. Their proportion is 92% whereas in very poor and poor households, this proportion is 88% and 89% respectively. According to the chi-square test, the relationship between vitamin A supplementation coverage does not seem to be significantly related to the standard of living of the household, at the 5% threshold, in rural areas (p=0.079).

In urban areas, the lowest rate unlike at the global level, the lowest rate was recorded among children from very poor households. According to the chi-square test, the relationship between vitamin A supplementation coverage does not seem to be significantly related to household standard of living, at the 5% threshold, in urban areas (p=0.502).

Graph E.4: Coverage of vitamin A supplementation for children aged 6 to 59 months according to the standard of living of the household in which the child lives.



8.2.5.6. Coverage of children's vitamin A supplementation and caregiver's knowledge of the vitamin

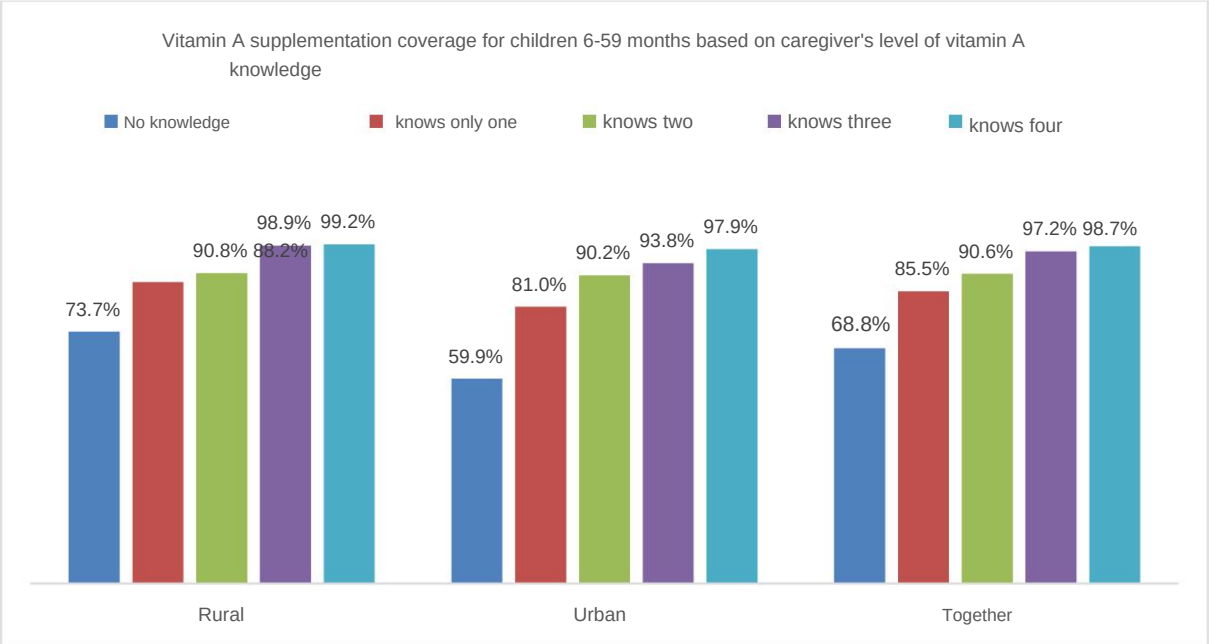
Based on some questions about vitamin A, the level of knowledge about this product was calculated. It shows the level of knowledge of vitamin A that caregivers have.

The results of analyzes of the cross between knowledge of vitamin A and the fact of supplementing the child, showed that the coverage of vitamin A supplementation increases according to the level of knowledge of vitamin A as shown in graph E.5.
According to this graph, for all and for each area of residence, the proportion of children supplemented increases continuously with the level of knowledge of vitamin A. Coverage increases from 69% for the children of caregivers n having none

99% vitamin A knowledge for children from those who have perfect vitamin A knowledge.

The analysis by area of residence shows the same trend as the overall level. Coverage improves significantly as a function of vitamin A knowledge level. According to the chi-square test, the difference in vitamin A supplementation coverage between children as a function of vitamin A knowledge level , is significant at the 5% level (p=0.000) for both rural and urban areas.

Graph E.5: Coverage of vitamin A supplementation for children aged 6 to 59 months according to the level of knowledge of vitamin A.



8.2.6. COMPARISON OF ADMINISTRATIVE, PEC AND QUALITY CONTROL

After the distribution campaign, the health services hold meetings during which statistics are compiled to calculate the different coverages. These coverages are based on planning data (population projection from the INS) and the number of children supplemented in the field.

In addition, to control the quality of the data collected by the interviewers, a supervision mission had been deployed, one of whose roles was the collection of data with a reduced questionnaire, in the households already visited by the interviewers (double collection) .

According to the administrative source, 103% of children throughout the national territory have been supplemented with vitamin A. This proportion is 105% for children aged 12 to 59 months against 93% for children aged 6 to 11 months. . These results are different from those found by the PEC survey carried out. According to this survey, overall 85% of children were supplemented.

This coverage varies between 84% and 87%. This interval does not contain the administrative coverage which is 103%. Which could mean that the administrative coverage is significantly different

coverage from the PEC survey. On the other hand, the results of the quality control carried out by the supervisors confirm the coverage from the PEC survey.

Table E.8: Comparison of the different coverages of vitamin A supplementation by source of information.

Source	Age group and together	Vit A Supplement Coverage (%)	95% CI	
			Inferior	Superior
CEP survey	6 to 11 months	84.6	79.7	89.2
	12 to 59 months	86.4	83.9	87.1
	Together	86.2	83.9	86.8
Administration	6 to 11 months	93.0		
	12 to 59 months	105.0		
	Together	103.0		
Quality Control	Together	87	80.6	92.6

8.2.7. Declaration of the birth of the child to the civil status

8.2.7.1. Possession of the birth certificate and declaration to the civil status.

For this campaign, registration in the civil status of at least 95% of children from 0 to 2 months identified without birth certificates in all municipalities and those beyond 2 months and the promotion of the universal registration of children in the civil registry within the legal period of 2 months, were an integral part. As a reminder, the questions on the questions on the registration of children in the civil status, concerned children from 6 to 59 months. This could make it possible to assess the interoperability between health and civil registration for past campaigns and the universal registration of children.

In order to measure the level of birth registration, the questions about the possession of the extract, the birth certificate or the supplementary judgment of the child and its registration in the civil status, had been asked.

Overall, nearly 67% (5% whose certificate was seen and 62% certificate not seen) of the persons in charge of the children, confirmed that their children have a civil status document (excerpt, certificate of birth). Nearly 28% do not have a civil status document and nearly 6% of parents do not know whether their child has a birth certificate or not.
The proportion of children with a civil status document is lower in rural areas (60%) than in urban areas (80%).

Furthermore, time elapses between the registration of births and the obtaining of civil status documents. This is why the question on birth registration was only asked of persons in charge of children who declared that their children had no extract or civil status document. The analyzes of this question revealed that among the children who did not have a birth certificate or certificate, only 13% had been declared to the civil registry. These proportions are respectively 21% and 11% respectively in urban and rural areas (see Table E.9).

For birth registration, analyzes have shown that the involvement of the child's father is important because he is the main motivator. Overall, 76% of respondents mentioned that it is the father of the child who motivates them to register the child in the civil registry.

This reality is as valid in urban areas as in rural areas. The motivation of the child's mother was mentioned by nearly 10% of respondents (see Table E.9.).

8.2.7.2. Reason for non-registration of children in the civil registry

To understand the non-registration of children, the question was asked about the reasons. On the whole it is mainly about the negligence of the parents, the remoteness of the town hall and the lack of means. The detailed analysis by area of residence shows that the order varies from one area to another. After negligence, lack of financial means is the second reason cited in urban areas, while distance from civil status centers represents the second reason in rural areas (see Table **E.9).**

Table E.9: Distribution (in %) of children aged 6 to 59 months, registered or not in the civil registry and the reasons of non-registration by place of residence.

		Place of residence					
		Rural		Urban		Together	
Birth certificate or certificate		n	%	n	%	n	%
Possession of a birth certificate/ act?	Yes, seen	59	3.6%	55	6.5%	114	4.6%
	Yes not seen	908	56.0%	626	73.8%	1534	62.1%
	No, no birth certificate or act	560	34.5%	125	14.8%	685	27.7%
	Do not know	95	5.9%	41	4.9%	137	5.5%
Was the birth of (name) registered/declared with the civil registry?	Yes	73	11.2%	35	21.0%	108	13.2%
	Nope	456	69.6%	86	51.5%	542	65.9%
	Do not know	126	19.2%	46	27.5%	172	20.9%
Who motivated you to register your child in the civil registry?	child's father	795	76.4%	544	76.0%	1340	76.3%
	Child's mother	105	10.1%	67	9.3%	172	9.8%
	Other relatives of the child	31	3.0%	49	6.9%	80	4.6%
	Friend of the child's parents	6	0.6%	11	1.6%	18	1.0%
	Health worker	64	6.2%	27	3.8%	91	5.2%
	Civil registrar	26	2.5%	9	1.3%	35	2.0%
	Don't know	13	1.2%	8	1.1%	21	1.2%
Reasons for not registering the birth of the child	Town hall too far	73	16.1%	6	6.7%	79	14.6%
	No money to do it	51	11.3%	17	20.0%	69	12.7%
	Laziness/Negligence	254	55.8%	44	51.7%	299	55.1%
	Not important	19	4.2%	2	2.5%	21	4.0%
	Don't know	58	12.7%	16	19.2%	74	13.7%

8.3. Identification of the factors influencing the coverage of the supplementation of the vitamin A

This part is devoted to the search for factors that influence vitamin A supplementation. The analyzes will be carried out by place of residence.

These factors are complex and may vary from one place of residence to another. They can be the characteristics of the person in charge of the children, those of the head of household, those of the child, environmental or social factors, etc.

To prepare the explanatory analysis model, we performed the bivariate analysis to measure the association between the explained variable "the child is supplemented or not" and the explanatory variables (characteristics of the person in charge of the child, household, child, etc.) using the chi-square statistic at the 5% threshold.

Explanatory analysis to highlight factors influencing supplementation coverage among children 6-59 months of age during vitamin A supplementation campaigns.

The variable “Is the child supplemented” will be dichotomized. This will allow us to use the method of binary logistic regression. We will use the step-by-step bottom-up method (likelihood ratio) to introduce one by one the variables in order to identify the factors that could influence vitamin A supplementation and the mechanism of action between them.

The literature search on vitamin A supplementation involves a few groups of factors.

Context of residence : In this study, this concept refers to the place of residence and the region of residence at the time of the survey.

Sociocultural factors : In this study, the level of education of the person responsible for the child, exposure to the media, knowledge of vitamin A, the place frequented for care of household members, the declaration of of the child to civil status.

Also the gender report apprehended through “the person who makes the decision for the supplementation of children with vitamin A” and the “Wife's opinion after the husband's decision-making”.

Sociodemographic factors : This will be the age of the person in charge of the child, the sex of the child, his age, his link with the CM.

Socio-economic factors : They are captured in this study by the standard of living of the household through the quintile of economic well-being of the household, the occupation of the person in charge of the child.

8.3.1. Conceptual frame

General assumption

The analyzes and the review of the literature carried out made it possible to formulate the following general hypothesis: **The coverage of vitamin A supplementation for children aged 6 to 59 months is the result of a certain number of constraints or obstacles related to the context of residence, socio-cultural factors, socio-demographic factors and socio-economic factors.**

8.3.2. Bivariate analysis results

At the level of the bivariate analysis, it was observed, as mentioned above, an association at the threshold of 1%, 5% and 10% between vitamin A supplementation and certain variables. It is :

- o Child Health Knowledge Index
- o Wealth level
- o The place of residence
- o The recoded relationship
- o The educational level of the head of household
- o The educational level of the person in charge of the child
- o The perception of the distribution campaigns often organized by the Government and his partners
- o Perception on the vitamin A supplementation campaign in particular.
- o The place most frequently visited for medical care

- o Being informed of the mass campaign before it starts
- o The influence of the person who makes the decision whether or not your child benefits from the SVA;
- o Consideration of the woman's opinion when your husband/partner/someone else decides whether or not your child benefits from the VAS;
- o The person who decides on the health of the children
- o The most credible source of information about your children's health
- o Motivation to give vitamin A to your children

On the other hand, some variables do not have a significant influence on vitamin A coverage. For example:

- o The sex of the child;
- o The main activity of the person in charge of the child and that of the Head of household;
- o The sex of the person in charge of the child and the head of the household;
- o The fact of recommending the SVA to someone in his entourage;
- o The fact of hearing a person of the entourage or a neighbor being opposed to the VAS;
- o The fact of registering the birth of the child in the civil status;
- o The age of the child;
- o The age group of the person in charge of the child.

In order to measure the net effect of these variables on the coverage of vitamin A supplementation, a regression model in which these variables will be introduced is necessary.

8.3.3. Results of the explanatory analysis

This section aims to identify, in a multivariate explanatory approach, the factors that can influence the coverage of vitamin A supplementation. This approach is based on the binary logistic regression model. We recall that the application of this statistical model is justified by the qualitative and dichotomous nature of the dependent variable (vitamin A coverage).

After the collinearity and correlation analyzes between the variables, the ascending likelihood regression method was performed.

To do this, the search for determinants, the results of the explanatory analysis are presented in table E.10 in the appendix. In order to identify for each area of residence and for all, analyzes by area of residence and for all were carried out. Thus, the variables significantly associated with the coverage of vitamin A supplementation at the threshold of 1%, 5% and 10%, are presented in the following sections.

8.3.3.1. Influence of the vitamin A knowledge index

As a reminder, the vitamin A knowledge index takes into account information related to vitamin A (the name of the product, the importance of vitamin A, its frequency of administration in the year, the age of the first take).

The chance for children to be supplemented varies significantly with the level of knowledge of vitamin A of the person in charge, especially for those who were able to give at least 2 correct answers for the whole country.

By place of residence, the vitamin A knowledge index of caregivers is not significant in urban areas. It is important to remember that vitamin A supplementation coverage is higher in rural than in urban areas.

In urban settings, analyzes show a child's chance of being supplemented increases dramatically with the caregiver's level of vitamin A knowledge.
For children, this chance increases by 1 times, 2 times, 9 times or 8 times, if the person who takes care of him gives respectively one, two, three or four correct answers.

8.3.3.2. Influence of the level of education of the head of household and the person in charge of the child

As for the level of education of heads of household and caregivers, the values of the coefficients (Exp (B)) show that the educational level of the person in charge of the child has more influence on vitamin A coverage although both are significantly related to coverage. The positive influence of the level of education of the person in charge of the child was recorded only for those with secondary education because the children of these people are 1.33 times more likely to have the vitamin A than the children of those who have not studied. This could mean that improving the level of education of both the CM and the person in charge of the child does not necessarily improve the coverage of vitamin A supplementation. The same observation was also made in each place of residence (urban, rural).

8.3.3.3. Influence of perception on vitamin A

According to the regression results, improving the perception of vitamin A by caregivers has a significant influence on vitamin A. The children of people who think vitamin A is good or acceptable, are more likely to be supplemented compared to those who think vitamin A is bad or not pronounced.

Depending on the place of residence also, the analyzes show that the perception of vitamin A has a significant influence on vitamin A. Increasing the proportion of people who think that vitamin A is above all acceptable would increase the proportion of children supplemented as well. both in urban and rural settings. This change in perception would double the chances of children being supplemented.

8.3.3.4. Influence of the place frequented for medical care

The place frequented to receive care for household members also seems to have a significant influence on vitamin A coverage, especially the children of people who go to health facilities or who go to itinerant sellers of pharmaceutical drugs. The children of those who visit traditional healers are less likely to be supplemented with vitamin A than other children.

Encouraging parents or caregivers to attend health facilities in general could thus have a positive impact on vitamin A coverage.

8.3.3.5. Influence of information before the campaign is held

During the preparatory phases of the vitamin A administration campaign, a communication strategy is put in place. It aims to inform the population of the holding of the campaign by specifying the period and the target population. This allows caregivers to take the necessary steps to have children supplemented.

According to the results of the regression model, the fact of being informed of the holding of the campaign multiplies by 13, the chance of his child to be supplemented.

Thus, multiplying communication, awareness and information sessions could have a considerable impact on improving vitamin A coverage for the whole country, but also in rural and urban areas.

8.3.3.6. Influence of the age of the person in charge of the child

All other things being equal, the age of the caregiver is significantly related to the coverage of vitamin A supplementation but the increase in the age of the caregiver, would not increase my supplementation coverage, all other things being equal. The age of the child's caregiver was not taken into account for the global model.

8.3.3.7. Influence of the declaration of the child to the civil status

As part of the interoperability between health and civil status, vitamin A administration operations were coupled with the registration of children in the civil status.

According to the analyses, the fact of declaring the birth of the child to the civil registry has a significant influence on the vitamin A coverage. be supplemented than those whose births were not registered.

In urban areas, the fact of registering your child in the civil registry, would multiply his chances by about 3 to be supplemented. Thus, carrying out birth registration campaigns in the civil registry to obtain the child's documents could increase the chances of being supplemented. This improved the coverage of vitamin A supplementation in urban areas.

8.3.3.8. Influence of the activity of the head of household and the person in charge of the child

All other things being equal, the influence of the economic activity of both the head and the person in charge of the child was noted according to the results of the analyses. According to these results, the children of heads of household who work in the agricultural or artisanal sector or who are housewives have less chance of being supplemented compared to the children of heads of household exercising other economic activities.

As far as the economic activity of the person in charge of the child is concerned, they are children of those who work in the public or agricultural sector or who are still studying (pupil or student).

8.3.3.9. Influence of the sex of the person in charge of the child

After the data collection, the analyzes showed that 58% of the people in charge of the children surveyed are women against 42% men. The results of the multivariate analyzes showed that the sex of the person taking care of the child has a significant influence on his vitamin A supplementation. be supplemented than those followed by men.

8.3.3.10. Influence of the person making the decision to supplement the child

The decision to supplement the child significantly influences the coverage of vitamin A supplementation.

The results show that when the woman decides alone, she is more likely to have no supplements. On the other hand, when she decides it together with her spouse, the children have a better chance of being supplemented. Children for whom the parents (father and mother) decide together for their supplementation, are 4 times more likely to be supplemented compared to those for whom the mother decides alone.

All other things being equal, when the decision is made by the woman alone, the children are less likely to be supplemented. Therefore, encouraging communication between couples about the health of household members in general and about supplementation in particular is an element that could help improve coverage of vitamin A supplementation.

Overall, the multivariate analyzes made it possible to identify factors having a positive influence on vitamin A supplementation for the entire study area and by place of residence. Acting on these factors could contribute to significantly increasing the coverage of vitamin A supplementation. These are:

- The vitamin A knowledge index;
- The positive perception of those in charge of children on vitamin A;
- Visiting health facilities to receive care;
- Informing the population of the holding of the campaign;
- The registration of births in the civil status;
- Of letting women take care of the children.

PART 3: HEALTH PERSONNEL

8.4. Sample Description

As a reminder, in each selected ZD, a health worker if there was a health center was to be surveyed. Thus, at most 124 health workers were targeted for this survey (1 health worker per EA).

The choice of health worker in each cluster was systematic. This is the health worker or his deputy if the latter has been involved in campaign activities. In the absence of the health worker and his deputy, the person to be interviewed was the one who had been most involved in campaign activities. If the cluster has 2 or more health centers, a draw between the health centers will be carried out.

Thus, after the survey, a total of 105 health workers out of the 124 planned were surveyed, representing a coverage of 85% overall, as shown in Table PS.1.

Table PS1: Breakdown of PS planned and surveyed by place of residence.

Stratum	Number PS planned	Number PS affected	Execution rate (%)
Urban	62	48	77.41
Rural	62	57	91.93
Together	**124**	**105**	**84.68**

8.4.1. Respondent characteristics

8.4.1.1. Distribution of respondents by gender

Of the health workers surveyed, overall, nearly 37% were female compared to 63% male. But in urban areas, the proportion of women interviewed is higher than that of men (52% against 48%). On the other hand, in the rural area, 75% of respondents were men against 25% women.

8.4.1.2. Function of respondents in health facilities

Although the EPI agent is the one responsible for vitamin A supplementation, during the campaign, the nurses were the most involved in both rural and urban areas, as Table PS2 shows.

According to the results in the table below, overall, about 37% of respondents were nurses, 28% were EPI agents and 12% were doctors. These three categories of the medical profession were the most involved in this campaign. For the other categories, their proportion does not exceed 10%. This situation is also valid for the urban environment. But in rural areas, after nurses and EPI agents, senior health technicians occupy third place.

8.4.1.1. Level of education of respondents in health facilities

Becoming a health worker means having received training in this field. It is for the analysis of the level of education of the respondents that all of them have studied in both rural and urban areas. Their minimum level is lower secondary . 16% of the health personnel surveyed have a lower secondary education . For those who have the 2nd cycle secondary level is 59% and nearly 25% have completed higher education.

In urban areas, nearly 19% have the 1st cycle secondary education level, 52% have the 2nd cycle secondary level and 29% have the higher level.

In rural areas, nearly 14% have lower secondary education , 65% have upper secondary education and 21% have higher education (see Table PS2).

Table PS2 : Distribution of health workers involved in the campaign according to their characteristics by place of residence.

Respondent characteristics		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Sex of respondent	Male	43	75.4%	23	47.9%	66	62.9%
	Feminine	14	24.6%	25	52.1%	39	37.1%
Educational level	Unschooled	0	0.0%	0	0.0%	0	0.0%
	Primary	0	0.0%	0	0.0%	0	0.0%
	1st cycle secondary	8	14.0%	9	18.8%	17	16.2%
	2nd cycle secondary	37	64.9%	25	52.1%	62	59.0%
	Superior	12	21.1%	14	29.2%	26	24.8%
What is your role in the health facility?	Nurse	19	33.3%	20	41.7%	39	37.1%
	Caregiver	3	5.3%	4	8.3%	7	6.7%
	Doctor	5	8.8%	8	16.7%	13	12.4%
	EPI officer	15	26.3%	14	29.2%	29	27.6%
	Hall girl/boy	0	0.0%	0	0.0%	0	0.0%
	senior health technician	9	15.8%	0	0.0%	9	8.6%
	Other (explain, list	6	10.5%	2	4.2%	8	7.6%

8.4.1.2. Average number of years of experience of respondents

Place of residence	Average number of years of experience
Rural	10.19
Urban	11.50
Together	10.79

The number of years of experience was calculated by place of residence. According to the results of these calculations, the average number of years of service for respondents is about 11 years overall and for urban areas. He is 10 years old in a rural setting.

8.4.2. Vitamin A training

This section discusses vitamin A training by health personnel, time since last training, and duration of training.

8.4.2.1. Participation in vitamin A training

Training is sometimes organized for health personnel as part of capacity building. Health workers represent an important link in the chain of communication according to the information received from the people in charge of the children. Thus, their capacity building could improve the quality of the message conveyed during the campaign or during their routine activities in the health structures.

As for vitamin A, nearly 89% of the health workers interviewed said they had participated in training concerning it. In rural areas, this proportion is 88% and 90% in urban areas (see table PS3).

8.4.2.2. Time elapsed since last vitamin A training and duration training

The question on the time elapsed since the last training on vitamin A was asked to health workers who participated in this training. The training received by health workers is relatively recent because 83% of them claim to have received it less than 3 months ago. The proportion of those who affirmed the formation of 3 to 6 months, is nearly 8%. It's worth mentioning that about 2% said they can't remember how long their last vitamin A training was.

The analysis by area of residence shows a higher proportion in rural areas of those who said that their last training on vitamin A dates from less than 3 months. This proportion is 86% against 79% in urban areas.

As for the duration of the training, it is most often held in one or two days depending on the respondents. Nearly 52% said it took place over a single day and 24% said their training took place over 2 days. These two proportions are the highest in both urban and rural areas (see table PS3).

Table PS3: Distribution of health workers involved in the campaign according to participation in the training, the time elapsed since training, the duration of training by place of residence.

Vitamin A training		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Have you received training on vitamin A?	Nope	7	12.3%	5	10.4%	12	11.4%
	Yes	50	87.7%	43	89.6%	93	88.6%
How long ago did you last receive Vitamin A training?	Less than 3 months	43	86.0%	34	79.1%	77	82.8%
	3 to 6 months 7 to 12	5	10.0%	2	4.7%	7	7.5%
	months	1	2.0%	2	4.7%	3	3.2%
	More than 1 year	1	2.0%	3	7.0%	4	4.3%
	I do not remember	0	0.0%	2	4.7%	2	2.2%
How long did the Vitamin A training take?	Less than half a day	2	4.0%	7	16.3%	9	9.7%
	Half a day	2	4.0%	6	14.0%	8	8.6%
	One day	29	58.0%	19	44.2%	48	51.6%
	Two days	14	28.0%	8	18.6%	22	23.7%
	Others	3	6.0%	3	7.0%	6	6.5%

8.4.3. Sources of vitamin A information.

In addition to training on vitamin A, other sources of information on vitamin A are used by health workers. These are mainly documents provided by the MSHP to the health structures, posters, leaflets or technical data sheets; the media and exchanges between colleagues. This reality is as valid for rural as for urban areas.

Table PS4: Distribution of health workers involved in the campaign according to sources of information on vitamin A by place of residence.

Respondent characteristics		Place of residence					
		Rural		Urban		Together	
			%	not	%	not	%
MSHP documents	Nope	# 21	36.8% 21		43.8%	42	40.0%
	Yes	36	63.2% 27		56.3%	63	60.0%
Local NGO	Nope	56	98.2% 44 1.8%		91.7%	100	95.2%
	Yes		4 26.3% 10		8.3%		4.8%
Continuing education	Nope	1	73.7% 38		20.8%	5	23.8%
	Yes	15	82.5% 43 17.5%		79.2%	25	76.2%
TV/Radio/Newspapers	Nope	42	5 73.7% 45		89.6%	80	85.7%
	Yes	47 10	26.3 % 3 89.5%		10.4%	90 15	14.3%
Poster, leaflet, technical sheet	Nope	42	40 10.5% 8		93.8%	87	82.9%
	Yes	15	98.2% 47 1.8%		6.3%	18	17.1%
Colleagues	Nope	51	1 93.0% 47		83.3%	91	86.7%
	Yes	6	7.0% 1		16.7%	14	13.3%
Do not know	Nope	56			97.9%	103	98.1%
	Yes	1			2.1%	2	1.9%
Other (explain, list	Nope	53			97.9%	100	95.2%
	Yes	4			2.1%	5	4.8%

8.4.4. Vitamin A Information, Education and Communication Materials

According to caregivers, health workers are the most credible source for information on vitamin A. Their training on vitamin A, the use of different documents, make them the most knowledgeable people about vitamin A. Using Information, Education and Communication materials allows them to talk about vitamin A. According to the health workers interviewed, overall 79% said they use IEC materials. These proportions are 73% and 84% respectively in urban and rural areas.

As for the type of material used, vitamin posters were cited by 64% of respondents, followed by picture boxes (48%) and technical data sheets cited by 22% of respondents. This trend was observed in both places of residence.

Table PS5: Distribution of health workers involved in the campaign according to the use of equipment IEC by place of residence.

Use of IEC materials on vitamin A		Place of residence					
		Rural		Urban		Together	
		n %	n %	n %			
Do you have material (IEC) that talks about Vitamin A?	No	9 15.8%	13 27.1%	22 21.0%			
	Yes	48 84.2%	35 72.9%	83 79.0%			
Type of materials used							
Picture box	No	24 50.0%	19 54.3%	43 51.8%			
	Yes	24 50.0%	16 45.7%	40 48.2%			
Training module	No	40 83.3%	29 82.9%	69 83.1%			
	Yes	8 16.7%	6 17.1%	14 16.9%			
Vitamin A Poster	No	18 37.5%	12 34.3%	30 36.1%			
	Yes	30 62.5%	23 65.7%	53 63.9%			
National vitamin A administration protocol	No	40 83.3%	33 94.3%	73 88.0%			
	Yes	8 16.7%	2 5.7%	10 12.0%			
Technical sheet	No	36 75.0%	29 82.9%	65 78.3%			
	Yes	12 25.0%	6 17.1%	18 21.7%			
Other (explain, list	No	45 93.8%	33 94.3%	78 94.0%			

Yes	3 6.3%	2 5.7%	5 6.0%	

8.4.5. Index of knowledge of respondents about vitamin A.

Unlike the knowledge index of caregivers of vitamin A, 5 variables were used to calculate the knowledge index of vitamin A among health workers.

For the creation of the knowledge index of health workers on the vitamin, eight (5) questions were used:

1- Do you know what this product is for (vitamin A)? (Strengthening of the immune system, prevention of night blindness) 12.5 points for a good answer found.
2- At what age should children receive their first dose of vitamin A? 12.5 points for the correct answer (6 months) and 0 for a wrong answer.
3- How many times per year should a child receive vitamin A per year? 12.5 points for the correct answer (twice or every 6 months) and 0 for wrong answer.
4- What is the dosage of vitamin A for children 6 to 11 months? 12.5 points for the correct response (1 blue capsule 100,000 IU).
5- What is the dosage of vitamin A for children 12 to 59 months? 12.5 points for the correct response (1 red capsule 200,000 IU)

To assess the level of knowledge of vitamin A, several parameters were taken into account.
The following table gives the analyzes carried out on each variable. According to the results of this table in relation to the importance or the benefits of vitamin A, it should be mentioned that all the health personnel interviewed were able to give at least one answer.
The best known benefit of vitamin A is the prevention of blindness or the improvement of vision.
This benefit was cited by 85.7% of respondents overall. This benefit is better known in urban areas (87%) against 84% in rural areas. Growth enhancement as one of the importances of vitamin A was also widely mentioned. It was cited by 70% of respondents. These proportions are respectively 67% and 72% in urban and rural areas.

Knowledge of the first intake of vitamin A is known. According to the results of the analyses, approximately 93% of respondents affirmed that it is at 6 months that the child should take its first dose. This parameter is also better known in urban areas (96%) than in rural areas (91%).

The frequency of vitamin A administration was evaluated. This assessment measured knowledge about the number of times the vitamin is given to children over the course of a year.
The analysis of this question shows that the answers are split between “during campaigns” and “every six months”. Compared to the first answer, 33% of respondents mentioned that it is during the campaigns that children should be supplemented and 54% affirmed that it is during every six (6) months that they should be supplemented. In general, vitamin A administration campaigns are often organized every six months. The observation made at the global level is also valid for each place of residence.

Another question for assessing vitamin knowledge is the dose of vitamin A to be given to children according to their age.

This dose varies according to the child's age group. For children aged 6 to 11 months, nearly 98% of respondents maintained that a 100,000 IU blue capsule should be administered to these children. In urban areas, all respondents mentioned that a 100,000 IU blue capsule should be administered to children aged 6 to 11 months. This proportion is 97% in rural areas.

As for children aged 12 to 59 months, nearly 97% of respondents said that it is a 200,000 IU red capsule that these children should take. These proportions are respectively 98% and 97% in urban and rural areas (table PS5_bis).

Table PS5_bis: Distribution of health workers involved in the campaign according to the use of IEC equipment by place of residence.

		Place of residence					
		Rural		Urban		Together	
		n	%	n	%		
Prevent disease	Nope	38	66.7%	29	60.4%	67	63.8%
	Yes	19	33.3%	19	39.6%	38	36.2%
Foster growth	Nope	16	28.1%	16	33.3%	32	30.5%
	Yes	41	71.9%	32	66.7%	73	69.5%
Prevent blindness/promote vision	Nope	9	15.8%	6	12.5%	15	14.3%
	Yes	48	84.2%	42	87.5%	90	85.7%
Improve health	Nope	32	56.1%	21	43.8%	53	50.5%
	Yes	25	43.9%	27	56.3%	52	49.5%
Reduce the risk of death	Nope	52	91.2%	42	87.5%	94	89.5%
	Yes	5	8.8%	6	12.5%	11	10.5%
Prevent anemia	Nope	49	86.0%	42	87.5%	91	86.7%
	Yes	8	14.0%	6	12.5%	14	13.3%
Increase appetite	Nope	54	94.7%	39	81.3%	93	88.6%
	Yes	3	5.3%	9	18.8%	12	11.4%
Don't know, don't remember	Nope	57	100.0%	48	100.0%	105	100.0%
Other (explain, list	Nope	56	98.2%	45	93.8%	101	96.2%
	Yes	1	1.8%	3	6.3%	4	3.8%
At what age should children receive vitamin A for the first time?	At birth	2	3.5%	1	2.1%	3	2.9%
	At 6 months	52	91.2%	46	95.8%	98	93.3%
	At 9 months	0	0.0%	0	0.0%	0	0.0%
	At 1 year	0	0.0%	1	2.1%	1	1.0%
	I do not know	1	1.8%	0	0.0%	1	1.0%
	Other (explain, list	2	3.5%	0	0.0%	2	1.9%
How often should children 6-59 months receive vitamin A supplementation?	During the campaigns	18	31.6%	17	35.4%	35	33.3%
	Every 3 months	1	1.8%	3	6.3%	4	3.8%
	Every 6 months	33	57.9%	24	50.0%	57	54.3%
	Every 12 months		1.8%	1	2.1%	1	1.9%
	Every day I	1	2	0.0%	0	0.0%	0 0.0%
	don't know	0	3.5%	0	0.0%	2	1.9%
	Other, specify	2 2	3.5%	3	6.3%	5	4.8%
What is the dosage of vitamin A for children 6-11 months under normal conditions?	One blue capsule 100,000 IU	55	96.5%	48	100.0%	103	98.1%
	One red capsule 200,000 IU	1	1.8%	0	0.0%	1	1.0%
	Half blue capsule 100,000 IU Half red	0	0.0%	0	0.0%	0	0.0%
	capsule 200,000 IU I don't know Other,	1	1.8%	0	0.0%	1	1.0%
	specify One blue capsule 100,000 IU One	0	0.0%	0	0.0%	0	0.0%
	red capsule 200,000 IU 2 blue capsules	0	0.0%	0	0.0%	0	0.0%
What is the vitamin A dosage for children 12-59 months under normal conditions?	100,000 IU 2 red capsules 200,000 IU	1	1.8%	0	0.0%	1	1.0%
	I don't know Other, specify	55	96.5%	47	97.9%	102	97.1%
		0	0.0%	0	0.0%	0	0.0%
		0	0.0%	1	2.1%	1	1.0%
		1	1.8%	0	0.0%	1	1.0%
		0	0.0%	0	0.0%	0.0%	1 1 0

For each correct answer a score of 12.5 is assigned. This makes it possible to classify the health workers questioned according to the number of correct answers given.

The analyzes carried out from this index showed that the knowledge of health workers on vitamin A is partial. But it is important to note that all were able to cite at least 1 correct answer in rural areas and at least 2 correct answers in urban areas. Overall 35% gave 3 correct answers, 48% cited four correct answers and 8% have perfect knowledge.

In rural areas, 32% gave 3 correct answers, 49% cited four correct answers and 7% have perfect knowledge.

In urban areas, 40% gave 3 correct answers, 46% cited four correct answers and 8% have perfect knowledge.

Table PS 6: Distribution of health workers interviewed according to the knowledge index of health workers on vitamin A by place of residence.

Child Health Knowledge Index	Place of residence					
	Rural		Urban		Together	
	n	%	n	%	n	%
No knowledge	0	0.0%	0	0.0%	0	0.0%
knows only one	1	1.8%	0	0.0%	1	1.0%
knows two	6	10.5%	3	6.3%	9	8.6%
knows three	18	31.6%	19	39.6%	37	35.2%
knows four	28	49.1%	22	45.8%	50	47.6%
knows five	4	7.0%	4	8.3%	8	7.6%

8.4.6. QUALITY OF CAMPAIGN ACTIVITIES

As mentioned among the specific objectives of the study, the quality of the activities related to the campaign was measured through the number of days of participation of health workers in the campaign, their role during the campaign, the availability of vitamin HAS.

8.4.6.1. Average number of days of participation in the campaign

The campaign ran for an average of one week (from 07 to 01/14/2022). Overall, 78% of respondents participated in the survey for 4 days; 15% participated during 5 days and nearly 4% during 6 days.
In rural areas, some health workers only participated for 2 to 3 days during this campaign. Their proportion is 5%. The others participated for 4 to 6 days.
In urban areas, all health workers participated in the campaign for at least 4 days.

As for the duration (number of working hours per day), the analyzes revealed that 78% overall, work the whole day and 21% mentioned that they only worked during the half day. (see table PS7).

8.4.6.2. Role played during the campaign

The role played during the campaign determines the position occupied. As a health worker, both in urban and rural areas, the two main roles played during the campaign were supervision and the distribution of vitamin A in general, as shown by the results of the analyses.
In rural areas, for example, 61% of the health workers interviewed were supervisors and 28% were involved in the distribution of vitamin A.
In urban areas, 52% of health workers interviewed were supervisors and 42% were in the distribution of vitamin A (see table PS7).

8.4.6.3. Vitamin A supply during the campaign

The availability of vitamin A with the teams of distributors in the field ensures continuity of service until the end of the campaign. The analyzes showed that nearly 24% of the health workers interviewed declared that there had been problems with the supply of vitamin A. These proportions are 23% and 25% respectively in urban and rural areas. But for most cases, these problems were resolved according to 80% of health workers who said they had problems with supplies. These proportions are 71% and 91% respectively in rural and urban areas (see table PS7).

Table PS 7: Breakdown of health workers interviewed according to campaign assessment parameters by place of residence.

Campaign Appreciation		Place of residence					
		Rural		Urban		Together	
		n	%	n	%		
Q5.1-For how many days did you participate in the campaign in your District?	2.00	2	3.5%	0	0.0%	2	1.9%
	3.00	1	1.8%	0	0.0%	1	1.0%
	4.00	42	73.7%	40	83.3%	82	78.1%
	5.00	10	17.5%	6	12.5%	16	15.2%
	6.00	2	3.5%	2	4.2%	4	3.8%
Q5.1b-About how long per day? 1 hour or less		0	0.0%	0	0.0%	0	0.0%
	2-3 hours	0	0.0%	0	0.0%	0	0.0%
	half a day	12	21.1%	10	20.8%	22	21.0%
	All day	44	77.2%	38	79.2%	82	78.1%
	Other	1	1.8%	0	0.0%	1	1.0%
Q5.3-What role did you play during the campaign?	Social mobilization	3	5.3%	1	2.1%	4	3.8%
	Distribution of Vit A/Deworming 3	16	28.1%	20	41.7%	36	34.3%
	Supervisor	35	61.4%	25	52.1%	60	57.1%
	Data compilation	2	3.5%	2	4.2%	4	3.8%
	Malnutrition screening	0	0.0%	0	0.0%	0	0.0%
	Logistician	0	0.0%	0	0.0%	0	0.0%
	Others	1	1.8%	0	0.0%	1	1.0%
Q5.4-Were there any problems with the vitamin A supply during the campaign?	Nope	43	75.4%	37	77.1%	80	76.2%
	Yes	14	24.6%	11	22.9%	25	23.8%
Q5.5-If YES, have these issues been resolved?	Nope	4	28.6%	1	9.1%	5	20.0%
	Yes	10	71.4%	10	90.9%	20	80.0%
	Do not know	0	0.0%	0	0.0%	0	0.0%

In general, the number of health workers planned was not reached. This could be due to the fact that a health structure can cover several enumeration areas (EAs). Thus, the number of ZDs being much higher than the number of health facilities, the number of health workers surveyed would therefore be lower than the number of ZDs.

Based on the information collected and analyzed from these health workers, the knowledge index of health workers on vitamin A was calculated for each domain.

The analyzes carried out from this index showed that the knowledge of health workers on vitamin A is partial. But it is important to note that all were able to cite at least 1 correct answer in rural areas and at least 2 correct answers in urban areas. Overall 35% gave 3 correct answers, 48% cited four correct answers and 8% have perfect knowledge.

PART 4: COMMUNITY DISTRIBUTOR

After the health workers, the Community Distributors (CDs), were also interviewed. As a reminder, these CDDs were chosen on the basis of their exhaustive list of the locality, provided by the health worker.
Thus, from this list, a random choice was made. This also guaranteed luck for all the DCs who participated in the survey.

8.5. Sample Description

After the survey, a total of 112 community agents, including 54 in urban areas and 58 in rural areas, out of 164, were surveyed, representing a coverage of nearly 81% overall, as shown in Table DC-1.

Table DC1: Breakdown of DCs surveyed by place of residence.

Stratum	Planned DC number	Number of DCs affected	Execution rate (%)
Urban	62	54	77.41
Rural	62	58	91.93
Together	**124**	**105**	**84.68**

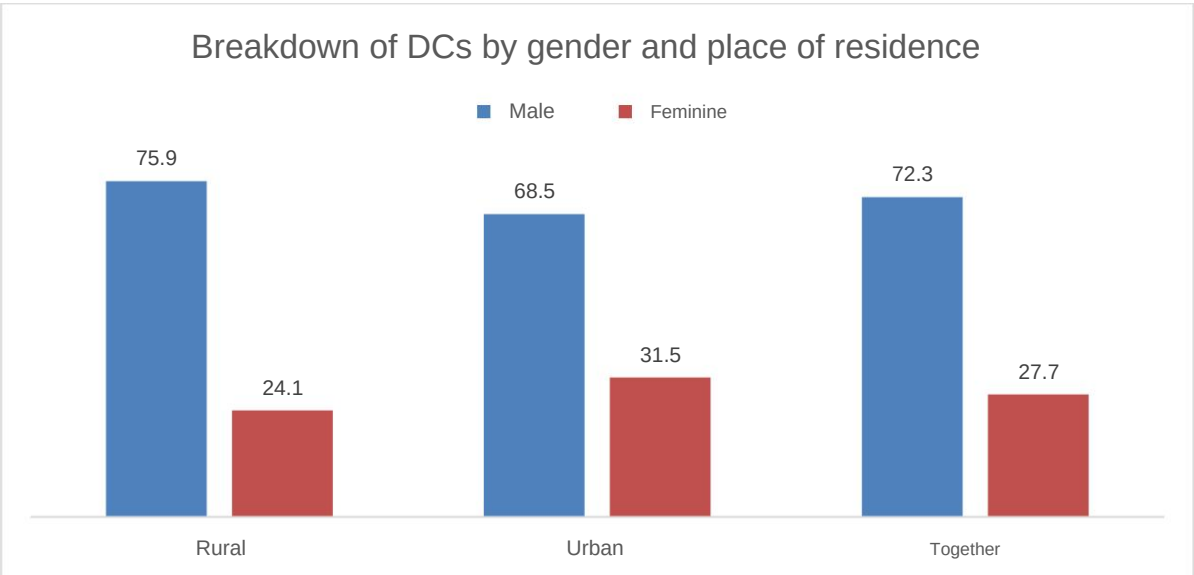
8.5.1. Respondent characteristics

The analysis of the characteristics of the community distributors concerned their sex, their number of years of experience and their level of education.

8.5.1.1. Distribution of respondents by gender

According to the DC1 graph, overall 28% of DCs surveyed were female compared to 72% male. The gap is greater in rural areas between women and men. In this area, the proportion of women is 24% against 76% for men. In urban areas, the proportion of DC women is almost 32% against 68% of men.

Graph DC1: Breakdown of CDDs surveyed by sex and place of residence



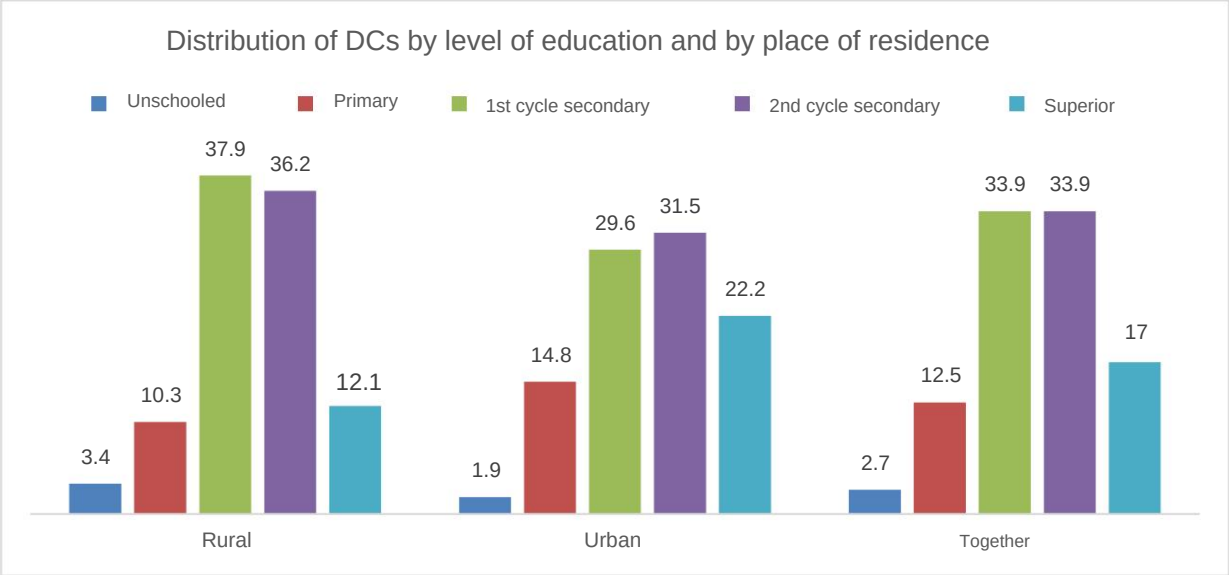
8.5.1.1. Distribution of respondents by level of education

Unlike health workers, some CDDs have no level of education. Their proportion is about 3%. And nearly 13% have the primary level. The proportion of DCs surveyed with secondary levels (1st and 2nd cycle) is 68% and that with the higher level is 17%.

In rural areas, the proportion of DCs with no level of education is 3% and 10% have the primary level, 74% have the secondary level (1st and 2nd cycle) and 12% have the higher level.

In urban areas, the proportion of DCs with no level of education is around 2% and 15% have primary level, 61% have secondary level (1st and 2nd cycle) and 22% have higher level.

Graph DC2: Breakdown of CDDs surveyed by level of education and place of residence



8.5.1.2. Average number of years of experience of respondents

Table DC2: Distribution of DCs according to level of education by place of residence.

Place of residence	How many years have you been RC/DC?	
	Mean	Standard Deviation
Rural	7.74	5.66
Urban	5.7	4.16
Total	6.76	5.07

Comparing health workers to DCs with respect to their length of service, we find that the former have a higher number of years. According to the results of the analysis, the average duration of DCs in this department is around 7 years overall. It is 6 years in urban areas and 8 years in rural areas.

8.5.2. Vitamin A training

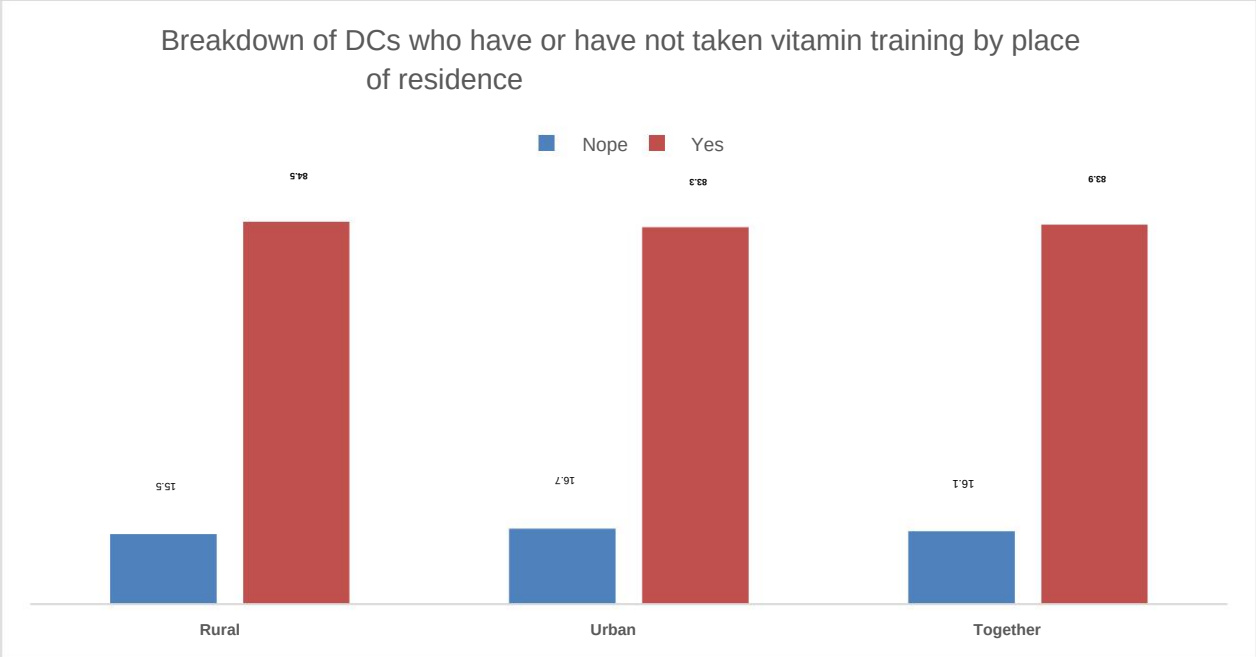
8.5.2.1. Participation in vitamin A training

As with health workers, community distributors also receive training on vitamin A distributed during campaigns. This allows them to be up to date in the event of the adoption of a new strategy. Thus, this survey made it possible to assess the proportion of CDDs who had received training on vitamin A.

According to the DC3 graph, overall, nearly 84% of DCs interviewed said they had received vitamin A training compared to 16% who said they had not received any vitamin A training.

In residential areas, the proportion of Community Distributors having received vitamin training in rural areas is 85% and 83% in urban areas.

Graph DC3: DC having or not having followed a training course on the vitamin by place of residence



8.5.2.2. Time elapsed since last vitamin A training and duration of training.

The question on the time elapsed since the last training on vitamin A is relatively recent. Overall nearly 82% of DCs said vitamin A training was less than 3 months old and 7% said it was 3-6 months old. It should be noted that 7% of DCs do not remember the date of the training received on vitamin A.

The proportion of those claiming to have received the training less than 3 months ago is higher in rural areas. It is 88% against 76% in urban areas.

In general, according to 57% of CDDs who participated in the training on vitamin A, this training takes place during one day, 16% attested that it took place over 2 days and 13% confirmed that it is held over half a day.

Table DC-4: Distribution of DCs according to the time elapsed since the training on vitamin A and and the duration of training by place of residence.

Vitamin A training and time elapsed since training		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Have you received training on vitamin A?	Nope	9	15.5%	9	16.7%	18	16.1%
	Yes	49	84.5%	45	83.3%	94	83.9%
How long ago did you last receive Vitamin A training?	Less than 3 months	43	87.8%	34	75.6%	77	81.9%
	3 to 6 months 7 to 12	2	4.1%	5	11.1%	7	7.4%
	months	0	0.0%	1	2.2%	1	1.1%
	More than 1 year	1	2.0%	1	2.2%	2	2.1%
	I do not remember	3	6.1%	4	8.9%	7	7.4%

8.5.3. Sources of vitamin A information.

In addition to training, other sources of information are exploited. These are mainly documents from the Ministry of Health and Public Hygiene. In addition to health documents, the exchange between service colleagues was mentioned by 13% of DCs living in urban areas.

Table DC-4: Distribution of DCs according to the source of information on vitamin A by place of residence.

Main source of information on vitamin A	Place of residence					
	Rural		Urban		Total	
	n	%	not	%	not	%
MSHP documents	15	25.9%	12	22.2%	27	24.1%
Local NGO	0	0.0%	1	1.9%	1	0.9%
Continuing education	32	55.2%	23	42.6%	55	49.1%
TV/Radio/Newspapers	3	5.2%	3	3.4%	6	7.4% 5.4%
Poster, leaflet, technical sheet	2	0.0%	3	4% 4	13.0%	0.0% 6 5.4%
Colleagues	0	6.9%	7	7.4%	7	6.3%
Do not know	2		0		2	1.8%
Other (explain, list	4		4		8	7.1%

8.5.4. Index of knowledge of respondents about vitamin A.

The DC knowledge index on vitamin A is an indicator that summarizes the level of knowledge of information on vitamin A. As for health workers, this indicator also takes into account the following 5 questions:

1- Do you know what this product is for (vitamin A)? (Strengthening of the immune system, prevention of night blindness) 12.5 points for a good answer found.
2- At what age should children receive their first dose of vitamin A? 12.5 points for the correct answer (6 months) and 0 for a wrong answer.
3- How many times per year should a child receive vitamin A per year? 12.5 points for the correct answer (twice or every 6 months) and 0 for wrong answer.
4- What is the dosage of vitamin A for children 6 to 11 months? 12.5 points for the correct response (1 blue capsule 100,000 IU).
5- What is the dosage of vitamin A for children 12 to 59 months? 12.5 points for the correct response (1 red capsule 200,000 IU)

The following table gives the analyzes carried out on each variable. According to the results of this table in relation to the importance or the benefits of vitamin A, only one person could cite a benefit of this product. The best known benefit of vitamin A is the prevention of blindness or the improvement of vision. This benefit was cited by 81% of DCs surveyed overall. This benefit is slightly better known in urban areas (82%) against 81% in rural areas.

As for the age of the first intake of vitamin A by the child, 83% of DCs surveyed stated that it is at 6 months that the child should take its first dose.

Regarding the frequency of taking vitamin A, the answers are divided between “during campaigns” and “every six months”. Compared to the first answer, 44% of respondents mentioned that it is during the campaigns that children should be supplemented and 41% affirmed that it is during every six (6) months that they should be supplemented. In general, vitamin A administration campaigns are often organized every six months. The observation made at the global level is also valid for each place of residence.

Another question for assessing vitamin knowledge is the dose of vitamin A to be given to children according to their age. This dose varies according to the child's age group.
For children aged 6 to 11 months, nearly 94% of respondents maintained that a 100,000 IU blue capsule should be administered to these children. As for children aged 12 to 59 months, nearly 94% of respondents said that it is a 200,000 IU red capsule that these children should take.

Table DC-4 bis: Distribution of DCs according to vitamin A knowledge parameters by environment of residence.

		Place of residence					
		Rural		Urban		Together	
		n	%	n	%		
Importance of Vitamin A							
Prevent disease	Nope	33	56.9%	30	55.6%	63	56.3%
	Yes	25	43.1%	24	44.4%	49	43.8%
Foster growth	Nope	20	34.5%	20	37.0%	40	35.7%
	Yes	38	65.5%	34	63.0%	72	64.3%
Prevent blindness/promote vision	Nope	11	19.0%	10	18.5%	21	18.8%
	Yes	47	81.0%	44	81.5%	91	81.3%
Improve health	Nope	29	50.0%	21	38.9%	50	44.6%
	Yes	29	50.0%	33	61.1%	62	55.4%
Reduce the risk of death	Nope	53	91.4%	48	88.9%	101	90.2%
	Yes	5	8.6%	6	11.1%	11	9.8%
Prevent anemia	Nope	50	86.2%	47	87.0%	97	86.6%
	Yes	8	13.8%	7	13.0%	15	13.4%
Increase appetite	Nope	51	87.9%	41	75.9%	92	82.1%
	Yes	7	12.1%	13	24.1%	20	17.9%
Don't know, don't remember	Nope	57	98.3%	54	100.0%	111	99.1%
	Yes	1	1.7%	0	0.0%	1	0.9%
Other (explain, list	Nope	54	93.1%	51	94.4%	105	93.8%
	Yes	4	6.9%	3	5.6%	7	6.3%
At what age should children receive vitamin A for the first time?	At birth	4	6.9%	5	9.3%	9	8.0%
	At 6 months	48	82.8%	45	83.3%	93	83.0%
	At 9 months	2	3.4%	1	1.9%	3	2.7%
	At 1 year	0	0.0%	0	0.0%	0	0.0%
	I do not know	0	0.0%	1	1.9%	1	0.9%
	Other (explain, list	4	6.9%	2	3.7%	6	5.4%
Q3.8-How often should children 6-59 months receive vitamin A supplementation?	During the campaigns	23	39.7%	26	48.1%	49	43.8%
	Every 3 months	2	3.4%	3	5.6%	5	4.5%
	Every 6 months	27	46.6%	19	35.2%	46	41.1%
	Every 12 months	0	0.0%	1	1.9%	1	0.9%
	Every day I don't	0	0.0%	0	0.0%	0	0.0%
	know Other,	1	1.7%	4	7.4%	5	4.5%
	specify One blue	5	8.6%	1	1.9%	6	5.4%
Q3.9-What is the dose of vitamin A for children aged 6-11 months under normal conditions?	capsule 100,000 IU One red	55	94.8%	50	92.6%	105	93.8%
	capsule 200,000 IU Half of the	1	1.7%	2	3.7%	3	2.7%
	blue capsule 100,000 IU	0	0.0%	0	0.0%	0	0.0%
	Half of the 200,000 IU red capsule	0	0.0%	0	0.0%	0	0.0%
	I don't know	0	0.0%	2	3.7%	2	1.8%
	Other, specify	2	3.4%	0	0.0%	2	1.8%
Q3.10-What is the dose of vitamin A for children aged 12-59 months under normal conditions?	One blue capsule 100,000 IU	2	3.4%	2	3.7%	4	3.6%
	One red capsule 200,000 IU 2	54	93.1%	50	92.6%	104	92.9%
	blue capsules 100,000 IU 2 red	0	0.0%	0	0.0%	0	0.0%
	capsules 200,000 IU I don't	0	0.0%	0	0.0%	0	0.0%
	know Other, specify	1	1.7%	2	3.7%	3	2.7%
		1	1.7%	0	0.0%	1	0.9%

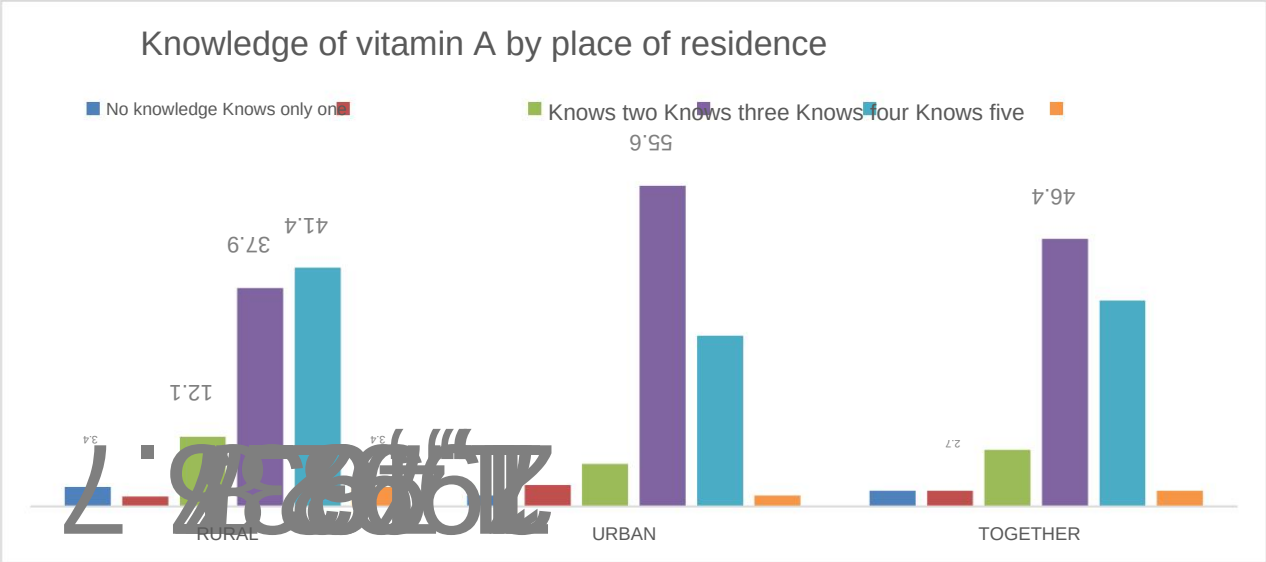
For each correct answer a score of 12.5 is assigned. This makes it possible to classify the health workers questioned according to the number of correct answers given.

For distributors, a non-negligible proportion has no knowledge of vitamin A. According to the results of the analyzes of this indicator, nearly 3% of DCs have no knowledge of vitamin A. Of the 5 questions asked, they gave no good answer. Almost 3% gave only one correct answer and 10% gave two correct answers. The highest proportion was recorded

among those who gave three correct answers (46%) followed by those who cited four correct answers (36%).

By grouping these DCs who gave at least three correct answers out of the 5, by area of residence, we find that the proportion is higher in urban than rural areas. These proportions are 87% and 83% respectively.

Graph DC4: Distribution of DCs according to the knowledge index on vitamin A and deworming by place of residence



8.5.5. QUALITY OF CAMPAIGN ACTIVITIES

The quality of campaign activities was measured from the time of participation in the campaign and their duration per day, the role played during the campaign, the supply of vitamin A, and the supervision missions.

8.5.5.1. Participation in the campaign and working time per day.

Questions on the number of days of participation in the campaign and the working time per day were also asked and analysed. According to the results of the analyses, 75% of DCs participated in the campaign for 4 days. This proportion is 80% in urban areas and 71% in rural areas.
It should also be remembered that in places sweeps have been organized in areas with low coverage. This could extend the duration of the campaign.

As for working time per day, the analyzes showed that almost 78% of the DCs surveyed said they worked the whole day and 21% only worked for half a day.

Table DC-5: Distribution of DCs according to the duration of participation in the campaign and duration of work by day by place of residence.

Service quality		Place of residence					
		Rural		Urban		Together	
		not		not		not	%
Q5.1-During 2.00 how many days did you participate in the campaign in your village?	3.00	2	% 3.4%	0	% 0.0%	2	1.8%
	4.00	2	3.4%	3	5.6%	5	4.5%
	5.00	41	70.7%	43	79.6%	84	75.0%
	6.00	10	17.2%	6	11.1%	16	14.3%
Q5.1b-About how many times a day did you participate in the campaign in your village?	1 hour or less	3	5.2%	2	3.7%	5	4.5%
	2-3 hours	0	0.0%	0	0.0%	0	0.0%
	half a day	0	0.0%	0	0.0%	0	0.0%
	All day	8	13.8%	15	27.8%	23	20.5%
	Other	49	84.5%	38	70.4%	87	77.7%
		1	1.7%	1	1.9%	2	1.8%

8.5.5.2. Vitamin A supply during the campaign

Another element of appreciation of the campaign is the supply of vitamin A to the teams in the field to avoid shortages during the campaign.

Overall few DCs claimed to have experienced breakups. Of the 112 CDDs surveyed, only 8 (ie 7%) claimed to have recorded shortages of vitamin A in the field against 93% who claimed to have recorded only one shortage. The proportions of DCs who claimed to have recorded a lack of vitamin A in the field are the same regardless of place of residence.

Of those who claimed to have recorded the lack of vitamin A in the field, overall nearly 63% said the problem had been resolved compared to 37% who maintained that the problem had not been resolved.

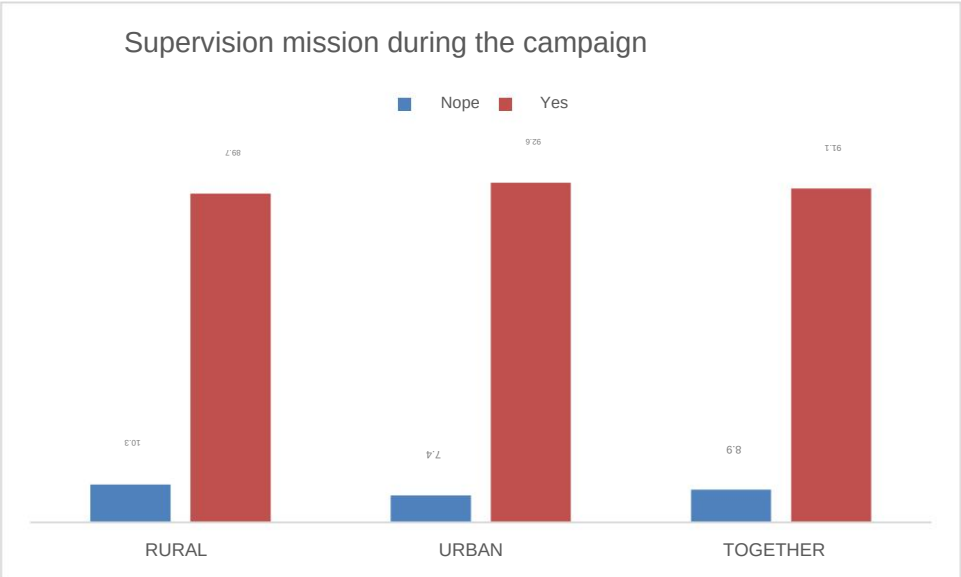
Table DC-6: Breakdown of DCs who did or did not mention cases of rupture and the resolution of these ruptures by place of residence.

Vitamin A supply		Place of residence					
		Rural		Urban		Together	
		n	%	n	%	n	%
Q5.6-Were there any problems with the vitamin A supply during the campaign?	No	54	93.1%	50	92.6%	104	92.9%
	Yes	4	6.9%	4	7.4%	8	7.1%
Q5.7-If YES, have these issues been resolved?	No	2	50.0%	1	25.0%	3	37.5%
	Yes	2	50.0%	3	75.0%	5	62.5%

8.5.5.3. Supervisory visit during the campaign

In order to ensure the application of the rules enacted during the training of DCs, supervision missions are organised. One of the objectives of supervision is to resolve problems observed in the field. This is why the question on the visit of a possible supervision mission was posed to the DC. According to the results of the analyses, 91 of the DCs interviewed claimed to have received a field mission during the campaign. This proportion is 93% in urban areas and 90% in rural areas.

Graphic: Supervision mission of CD teams during the campaign



8.5.6. Suggestion for improving vitamin A supplementation

In order to find solutions to certain problems observed, and being directly involved in the distribution in the field, questions on the possibilities of improving future campaigns were put to the DCs. The suggestions were thus formulated according to the place of residence.

In rural areas, the first three suggestions are to sensitize heads of households, in order to accepting supplementation and arranging (keeping children at home) for children to be supplemented; the motivation of distributors and health workers. These three suggestions were the most mentioned. Added to these are better coordination between the community and health personnel, the assurance of a sufficient and prompt supply of Vit A and the regular training of health workers and community distributors.

In urban areas, sensitization of heads of households, media campaigns (information of the population on the campaign) and motivation of health workers are the first three suggestions made. To these are added the continuous training of health and community workers and the motivation of community distributors.

Furthermore, it is important to mention that agents and distributors are at the operational level in the chain of execution of campaign activities.

Table DC-7: Distribution of DCs according to proposals for improving vitamin A supplementation by place of residence.

How do you think vitamin A supplementation could be improved in your area?		Place of residence					
		Rural		Urban		Total	
		n	%	n	%		
Media campaigns	No	44	75.9%	27	50.0%	71	63.4%
	Yes	14	24.1%	27	50.0%	41	36.6%
Sensitization of heads of household	No	13	22.4%	9	16.7%	22	19.6%
	Yes	45	77.6%	45	83.3%	90	80.4%
Better coordination between the community and health personnel	No	41	70.7%	40	74.1%	81	72.3%
	Yes	17	29.3%	14	25.9%	31	27.7%
Ensure a sufficient and prompt supply of Vit A	No	44	75.9%	36	66.7%	80	71.4%
	Yes	14	24.1%	18	33.3%	32	28.6%
Regular training of Agents	No	43	74.1%	33	61.1%	76	67.9%
	Yes	15	25.9%	21	38.9%	36	32.1%
The motivation of health workers	No	40	69.0%	31	57.4%	71	63.4%
	Yes	18	31.0%	23	42.6%	41	36.6%
The motivation of CHWs and volunteers	No	31	53.4%	34	63.0%	65	58.0%
	Yes	27	46.6%	20	37.0%	47	42.0%
Other	No	47	81.0%	47	87.0%	94	83.9%
	Yes	11	19.0%	7	13.0%	18	16.1%

9. DISCUSS

After the campaign, the PEC survey was organized by DAN/MSHP, with funding from Nutrition Internationale. The aim of this survey was to assess the overall coverage of vitamin A supplementation in children aged 6 to 59 months and the quality of the organization of the VAS campaign held from January 07 to 14, 2022.

For this evaluation, 1486 households and 2448 children were reached for the quantitative survey. For the qualitative component, 105 health workers and 105 distributors were surveyed.

The data collected from these different targets of the survey were analyzed according to domain and for the entire study area. Thus, in view of the results of these analyzes and for each of the specific objectives of our survey, it appears that:

Specific objective 1: Assess the effective coverage of vitamin A supplementation in children 6 to 59 months

For this objective, children from 6 to 59 months were specifically concerned, but the questions were asked of the people in charge of these children. According to the results of the analyses, the coverage of vitamin A supplementation for the whole is 85%. This coverage could vary between 84% and 87% obtained from the confidence interval calculated at the 95% threshold.
By place of residence, the highest coverage was recorded in rural areas. It is 88%. The actual coverage could be between 87% and 90%. In urban areas, the recorded coverage is 82% which could also vary between 80% and 85%.

It should be added that overall 2% of respondents do not know whether or not the child had received vitamin A. This proportion of DKs is higher in urban areas (2%) and lower in rural areas (1%). The difference in vitamin A supplementation coverage observed between rural and urban areas is significantly at the 5% threshold (P=0.000) according to the chi-square test performed.

In addition, cross-analyses between the coverage of vitamin A supplementation and the characteristics of the children and the caregivers of these children were carried out. These crosses make it possible to establish the profile of the children with the greatest chance of being supplemented.

For the characteristics of the children, the analysis was carried out with their age group and sex. According to their age group, the greatest coverage was recorded among children aged 12 to 59 months compared to those aged 6 to 11 months. By gender, the highest coverage was observed among girls.
But the significance test carried out at the 5% threshold shows that the difference in terms of coverage observed between these two age groups and between girls and boys is not significant.

For caregiver characteristics, analyzes showed that coverage of vitamin A supplementation increased with the age of the caregiver. Over time and in contact with health workers, she learns to take care of the child. This gives the latter more chance of being supplemented.

Unlike the age group of the caregiver, improving their level of education does not improve coverage of vitamin A supplementation. people in charge of children who have attended Koranic schools or who are limited to primary level. The most surprising aspect is the fact that the lowest coverage was recorded among children whose caregiver is at the top level. This reversed trend in expected vitamin A supplementation coverage could be due to other factors that certainly other types of analysis (multivariate analysis for example) could show.

Like the level of education, the coverage of vitamin A supplementation decreases with the improvement of household living conditions and this on a regular basis. This decline could be due to difficulties in accessing children from wealthy households.

As for the vitamin A knowledge index, the analyzes showed that the higher the index of the person in charge of the child, the more his child is exposed to vitamin A supplementation.
This means that the coverage of supplementation increases with the level of knowledge of vitamin A. The more the person is informed about vitamin A, the more is committed to having their child supplemented.

Like the Vitamin A Awareness Index, being informed of the vitamin supplementation campaign prepares caregivers to take all steps to supplement their children. This shows the effectiveness of the communication and population information strategies put in place.

It should be noted that according to the bivariate analyses, the Chi-2 test carried out at the 5% threshold shows that all characteristics are significantly associated with vitamin A supplementation.

Specific objective 2 and 8: To analyze the knowledge and perceptions of parents on vitamin A, as well as the mass distribution campaign for these products and to assess the levels of knowledge of vitamin A among health workers and distributors communities that participated in the last campaign;

The analysis of parents' level of knowledge of vitamin A supplementation was carried out using a composite variable (knowledge index) created from questions related to vitamin A. These are:

- knowledge of the name of the product distributed (vitamin A);
- the age at which the first dose of vitamin A was taken;
- The frequency of taking vitamin A per year;
- And its benefits.

According to this indicator, one in four respondents has no knowledge of vitamin A.
In other words, these respondents know neither the name of the product that was distributed during the campaign, nor the age at which the first dose of vitamin A was taken, nor its frequency of intake per year, or even its benefits. On the other hand, approximately 75% of respondents were able to cite at least one correct answer.

The low level of knowledge index of vitamin A supplementation in children has a significant implication on the intake of vitamin A because the coverage of vitamin A supplementation increases significantly with the knowledge index of vitamin A .

In general, this index shows that efforts still need to be made to improve the population's knowledge of the name of the product distributed (vitamin A), its benefits, the age at which it takes its first dose and its frequency of taken within the year.

The same assessment was made with health workers and community workers.
The knowledge index of health workers and CDDs on vitamin A is a more in-depth indicator than that calculated from households or caregivers. Health workers and community distributors are health service providers involved in the organization and execution of mass distribution campaign activities organized in Guinea. Thus, improving their knowledge of distributor products would be an important factor that could also improve the knowledge index of caregivers because they are the first sources of information from which the population is informed of the benefits of vitamin A.

For the index of knowledge of health workers and CDDs on vitamin A, in addition to the questions to households, the dosage of vitamin A for children aged 6 to 11 months and for those aged 12 to 59 months had been added .

The analyzes carried out with the health workers, based on this index, showed that their knowledge of vitamin A is partial, even if they were all able to give at least one correct answer in rural areas and at least 2 correct answers in urban area. This shows that vitamin A is better known in urban than rural areas.

For community distributors, a non-negligible proportion has no knowledge of vitamin A. According to the results of the analyzes of this indicator, nearly 3% of DCs have no knowledge of vitamin A. Of the 5 questions asked, they gave no good answer.

By making a comparison analysis between health workers and distributors, we find that the former know vitamin A better than the latter. This knowledge of the vitamin of the health agents compared to the community distributors, could be due to their level of education because according to the analyses, all the health agents have at least the first cycle secondary level. This gives them the advantage of being able to carry out research on vitamin A in addition to the continuing education provided by the Ministry of Health and Public Hygiene with the support of its partners.

Furthermore, by comparing household health service providers, we find that the former have a better knowledge of vitamin A. vitamin A standards and guidelines.

In addition to knowledge of the product administered during distribution campaigns, the population's perception of the campaign and vitamin A can have a significant impact on the coverage rate.

As for the vitamin A supplementation campaign, overall almost 88% of caregivers think the campaign is good or very good.

The analysis by area of residence shows that the campaign is widely appreciated regardless of the area of residence considered. According to the Khi2 test carried out at the 5% threshold, the difference in terms of appreciation observed between these two best is not significant.

Moreover, the second phase of the evaluation of perception concerns vitamin A itself. According to the results of the analyses, vitamin A also seems to be highly appreciated by caregivers because only one person in 10 does not like vitamin A. The reason given was the effect of it on the health of their children or the general lack of confidence in the products distributed during the campaigns.

But it is important to mention that a not insignificant proportion of caregivers are not pronounced. It is 10% for the whole and for the urban environment and 11% for the rural environment. At this level also, the difference observed between the two places of residence is not significant.

Specific objective 3 and 7: To identify the factors that influenced the coverage as well as the obstacles of the mass vitamin A supplementation campaign.

The identification of factors that can influence the coverage of vitamin supplementation was carried out using a binary logistic model. According to the analyses, these factors are complex and may vary from one place of residence to another. They can be linked to the characteristics of the person in charge of the children, those of the head of household, those of the child, environmental and social factors, etc.

Overall, the multivariate analyzes made it possible to identify factors having a positive influence on vitamin A supplementation for the entire study area and by place of residence. Acting on these factors could contribute to significantly increasing the coverage of vitamin A supplementation. These are:

- **The vitamin A knowledge index :** it indicates the level of knowledge of vitamin A. According to the analyses, the increase in the proportion of people with knowledge of vitamin A could significantly increase the proportion of children supplemented . This increase could be done through the most credible sources of information (Health workers), awareness campaigns on vitamin A with special emphasis on the name of the product (Vitamin A), its importance, the age of its first by the child and its frequency of intake per year.

- **The positive perception of caregivers on vitamin A :** during the PEC survey, perceptions on the campaigns in general and on vitamin A supplementation, in particular, were asked. Perception about vitamin A supplementation appears to have a significant influence on supplementation coverage. According to the results of the analyses, the more VAS is appreciated by caregivers, the more they are motivated to supplement their children.

- **Visiting health facilities to receive care:** Visiting health facilities to receive care can predispose people to accept the services offered during the campaigns. This predisposition gives their children a better chance of being supplemented because it could reduce the number of refusals. Also take advantage of health workers who are the most credible source of information, to inform these people who frequent the structures of the importance of vitamin A, the period of the campaign, etc.

- **Informing the population of the holding of the campaign :** Being informed of the holding of the campaign, makes it possible to take the necessary measures (keeping the children at home, period of the campaign, verification of the vaccination status of the child, etc) to benefit his children, the services offered during the campaign. Information is a major element in increasing coverage of vitamin A supplementation.

- **The registration of births in the civil status :** the registration of the birth of the child in the civil status, is a factor which testifies the attention given to the child. The birth certificate or extract issued by the town hall makes it possible to know the age of the child because it constitutes proof of the eligibility or otherwise of the child to benefit from the services offered during the campaign.

  All other things being equal, analyzes have shown that increasing the number of birth declarations in town halls could also increase VAS coverage. **This could be considered as the effect of interoperability between health and civil status.**

- **The fact of letting women take care of the children :** the fact that a child is looked after by a woman gives him a better chance of being supplemented compared to children who are looked after by a man.

Moreover, the obstacles could be identified through the reasons for not supplementing with vitamin A. For the children who had not been supplemented, several reasons or obstacles were mentioned. Among these reasons, the main one, both in rural and urban areas, was the lack of total ~~geographical coverage~~ **(distributing agents did not come)** ~~of all localities (villages, neighborhoods, sectors). This lack of total geographic cove~~rage thus deprives children living in unaffected localities from benefiting from the services provided during the campaign (vitamin A supplementation, screening for malnutrition, birth registration).
Another obstacle identified is the absence of children to supplement at home during the visit of the distributing agents at home. It is the second most mentioned reason, followed by the lack of information about the campaign.

Despite the implementation of an information and communication strategy, the lack of information was mentioned as a reason for the supplementation of children. Exposure to the media through health workers (Community Distributor, health workers), listening to the radio or television is also a powerful way to explain vitamin A supplementation in children.

communication strategy, via the means of communication, represents an essential tool for improving the coverage of vitamin A supplementation. It also contributes to the popularization and development of the practice of supplementation.

The refusal of households or persons in charge of children to have them supplement is not to remain on the sidelines of the obstacles mentioned by the people interviewed. It is more pronounced in urban areas than in rural areas.

The detailed analyzes show that the trend observed at the global level is also that observed in both rural and urban areas.

Taking into account the reasons cited, the coverage rate could be improved by taking measures against, for example, the lack of total geographical coverage, the absence of children at home during the passage of CDs and by further emphasizing the campaigns of information before the campaign is held.

Full coverage of all localities will supplement children living in these localities. The increase in the frequency with which CDs pass through households will make it possible to supplement the children absent during the previous visit.

Among the reasons mentioned, refusal seems to be the most difficult obstacle to deal with because it requires the involvement of several people in the awareness chain and the implementation of a specific strategy for each case of refusal. This could necessitate setting up a cell or a group to manage refusal cases. This cell can include health, administrative, customary and religious authorities.

In addition, interviews with distributors have also identified other obstacles that can help improve supplementation coverage. These obstacles were addressed in the form of suggestions to be made to improve the coverage of vitamin A supplementation. These suggestions were thus formulated by place of residence.

In rural areas, the first three suggestions are sensitization of heads of household, in order to accept the supplementation and to take the measures (keeping the children at home) so that the children are supplemented; the motivation of distributors and health workers. These three suggestions were the most mentioned. Added to these are better coordination between the community and health personnel, the assurance of a sufficient and prompt supply of Vit A and the regular training of health workers and community distributors.

In urban areas, sensitization of heads of households, media campaigns (information of the population on the campaign) and motivation of health workers are the first three suggestions made. To these are added the continuous training of health and community workers and the motivation of community distributors.

Specific objective 4: Evaluation of the effectiveness of campaign-related social mobilization activities mass distribution of vitamin A

To inform households about the campaign, social mobilization activities are carried out. They aim to convey specific messages on vitamin A, on the period of the campaign, the products to be distributed, the services provided during the campaign.
To achieve this, several sources of information are used, mainly health workers, social mobilizers, television, radio and town criers. This made it possible to reach 68% of households in rural areas and 57% in urban areas.

As for the most credible source of information about the vitamin, caregivers trust health staff and community workers overall more. By place of residence, television is the second most reliable source of information, while in rural areas, community workers are the most important source after health workers.

Furthermore, the effectiveness of the mobilization strategy put in place can be measured through the significant influence that being informed of the campaign has had on the coverage of vitamin A supplementation in threshold of 5% according to the Chi-square test. The analyzes showed that 96% of the children of the people who informed of the campaign had been supplemented.
This proportion was 67% for the children of parents who were not informed of the campaign.

Based on the results of the analyses, improving the coverage of vitamin A supplementation could involve increasing the proportion of caregivers, using the credible means mentioned by place of residence.

Specific objective 5: Assess the rate of birth registration in the civil registry;

As part of the interoperability between health and the state, the National Vaccination Days (JNV) are sometimes coupled with the birth registration campaign. For the past campaign, it was a question of registering in the civil status at least 95% of children from 0 to 2 months identified without birth certificates in all the health districts and those beyond 2 months and promoting the universal registration of children in the civil registry within the legal period of 2 months. During the PEC survey, questions on birth registration concerned children aged 6 to 59 months.
This could make it possible to assess the interoperability between health and civil registration for past campaigns and the universal registration of children.

Overall only one in four children is not registered in the civil registry. The three out of four registered in the civil registry concern children with birth certificates seen or not and children declared to the state whose certificate has not yet been returned to the parents of the child.

These high proportions of children registered in the civil registry could be partly due to the collaboration between health and the civil registry service but also to the efforts made by Technical and Financial Partners such as UNICEF, ENABEL in the framework for universal child registration.

For birth registration, the involvement of the child's parents, especially his father, is a determining factor because analyzes have shown that he is the main motivator for birth registration.

As for the reasons **for non-registration of children in the civil registry, the** detailed analyzes by area of residence show that the order of importance varies from one area to another. After the negligence of the parents to register their child in the civil status, the lack of financial means is the second reason cited in urban areas while the distance from the civil status centers represents the second reason in

rural area. Thus, these results show that strategies adapted to each place of residence must be put in place in order to make universal birth registration a reality in Guinea.

Specific objective 6: Perform a triangulation between the administrative data of the mass campaign and the results of the PECS survey;

Triangulation between different sources of information is a means of verification. For this, three different sources were used. These are administrative data collected during the campaign, data collected during the PEC survey by interviewers and data collected by supervisors during the PEC survey.

After the distribution campaign, the health services hold meetings during which the statistics are restored to calculate the different coverages. These coverages are based on planning data (INS population projection) and the number of children supplemented in the field.

In addition, to control the quality of the data collected by the interviewers, a supervision mission had been deployed, one of whose roles was the collection of data with a reduced questionnaire, in the households already visited by the interviewers (double collection) .

According to the administrative source, all the planned children were not only supplemented but also other children from elsewhere because during the planning phases, the number of doses of vitamin A provided to the teams took into account cases of excess vitamin A. 'children, cases of loss, waste. This is what made it possible to supplement with vitamin A, 103% of children throughout the national territory (100% of planned children and 3% are children supplemented but who had not been taken into account in the forecasts).

These results are different from those found by the PEC survey carried out. According to this survey, overall the proportion of children aged 6 to 59 months supplemented varies between 84% and 87%. This interval does not contain the administrative coverage which is 103%. This could mean that the administrative coverage is significantly different from the coverage resulting from the PEC survey. On the other hand, the results of the quality control carried out by the supervisors confirm the coverage from the PEC survey.

The difference observed between the administrative coverage rate and the coverage rate resulting from the PEC survey, could be due to several factors including, among others:

- **Methods for calculating coverage rates: the numerator and the denominator are obtained differently. They come from different sources;**
- **Sampling errors made during the survey (random selection Household) ;**
- **Lack of memory of the persons in charge of the children who were surveyed;**
- **The interview of another person in place of the person in charge of the child;**
- **The interview of the persons in charge of the child.**

10. CONCLUSION AND RECOMMENDATIONS

In general, the coverage survey made it possible to evaluate the past campaign in accordance with the objectives set for the whole country but also by place of residence.

The analysis of the characteristics of the respondents showed that the majority of the people in charge of the children surveyed are women. To get the best information about the child, it was recommended to interview the child's guardian. This made it possible to have quality information on the children eligible for the survey.

Analyzes of data from the survey showed that for all and for each place of residence, the proportion of children receiving supplements exceeds 80%, which was the target rate during the campaign. It was 85% overall (88% in rural areas and 82% in urban areas).

Comparative analyzes between the administrative coverage and that from the PEC survey showed that these two coverages are significantly different at the 5% threshold. The administrative coverages are outside the confidence interval calculated at the 95% threshold from the survey data. The difference observed between these coverage rates could be due to data on the number of target children estimated from census data who are susceptible to population movements, lack of memory of respondents, interview with a person different from the one who was with the child while taking vitamin A , sampling errors, etc.

In addition, during the same assessment, individual interviews were conducted with health workers and community distributors. As with the households, these interviews made it possible to measure their level of knowledge of vitamin A and deworming. According to these indices, (Health worker/CD knowledge index of vitamin A and deworming), knowledge about the products distributed is still limited as health service providers.

To improve the quality of the service provided during future vitamin A administration campaigns, the analyzes carried out on the basis of the data collected from households, health workers, community distributors and administrative officials of the health system have made it possible to formulate recommendations by level of involvement in the organization of the campaign.
Some of these recommendations made in previous reports come up regularly, certainly because of their lack of application.

To the Ministry of Health/Technical and financial partners.

- ÿ To share the results of the PEC survey, organize workshops to present the results of the survey in the health districts and above all discuss the recommendations and measures to be taken, for better management of the next campaign;

- ÿ Reinforce the interoperability between health and civil status because analyzes have shown that registering your child in the civil status has a positive influence on vaccination coverage. The result of interoperability between health and civil status on vaccination coverage could be an incentive factor for other collaborations (between health and preschool, for example). This could help decrease the number of children missed at home during DC's shift;

- ÿ Intensify communication by using the channels listened to and the most credible according to the places of residence before the campaign, especially in places frequented by women. Analyzes have shown that children followed by women are more likely to be supplemented;

ÿ Continue awareness campaigns among the population on the attendance of health facilities to benefit from health care. This prepares the population to accept the vitamin A supplement to children from 5 to 59 months during the campaigns;

ÿ Organize more capacity building for health personnel and community agents for whom training is the main source of information on vitamin A.

To the Prefectural Health Directors (DPS)/Regional Health Directors (DRS).

ÿ To combat the lack of geographical coverage, which was cited as the first reason of not taking vitamin A by children, it is necessary:

o Strengthen field supervision during the campaign and carry out a light interview in certain households in the localities already covered to ensure total geographical coverage;

o Produce maps of areas to be covered by team. These maps can also be produced and could help assess geographic coverage as teams move forward;

o Increase the number of distribution agents in order to reduce the number of localities to be covered to enable them to visit all the localities and go back to the households visited where the children were absent;

ÿ Put in place a communication strategy adapted to each area (area of residence) and using the most frequently cited sources of information in order to reach the maximum number of people;

ÿ Set up a refusal case management unit, made up of religious leaders, administrative and customary authorities where a significant proportion of parents who refuse to have their children supplemented because of religious considerations or bad information about vitamin A ;

ÿ Intensify information and awareness campaigns on the campaign several weeks before the start of the vitamin A supplementation campaign by emphasizing the benefits of vitamin A, the age of taking its first dose and its frequency of intake in the year in order to improve the household knowledge index on vitamin A;

11. APPENDICES

11.1.1. Count area drawn for the survey

Table A1: Breakdown of EAs selected by administrative region, prefecture and sub-prefecture.

Region Adm Prefecture		Commune	Milrest NUM ZD Household Pop			EA_status
Boke	BOFFA	KOBA-TATEMA Rural		20,168	1100	Regular
Boke	BOKE	bintimodiya	Rural	3	145	858 Standard
Boke	BOKE	Kanfarande	Rural	20	123	828 Standard
Boke	BOKE	Sangaredi	Rural	57	105	696 Standard
Boke	FRIA	Tormelin	Rural	12	187	1212 Standard
Boke	GAOUAL	Koumbia	Rural	29	180	1186 Regular
Boke	KOUNDARA Guingan		Rural	2	141	888 Regular
Boke	KOUNDARA Youkounkoun		Rural	3	213	1304RC
Faranah DABOLA		Dabola-center	Rural	24	129	880 Regular
Faranah DINGUIRAYE Banora			Rural	15	168	1097 Regular
Faranah DINGUIRAYE Dinguiraye-Rural center				29	133	994 Standard
Faranah FARANAH		Banyan	Rural	11	163	1116 Standard
Faranah FARANAH		Marela	Rural	3	369	3148 Standard
Faranah FARANAH		tiro	Rural	8	131	1434 Standard
Faranah KISSIDOUGOU Firawa (Yomadou) Rural				11	131	911 Standard
Faranah KISSIDOUGOU Yende-Millimou Rural				21	120	669 CR
Kankan KANKAN		Bate Nafadji	Rural	2	112	1021 Standard
Kankan KANKAN		Koumban	Rural	17	98	885 Standard
Kankan KANKAN		Tokounou	Rural	11	120	973 Standard
Kankan KEROUANE Banankoro			Rural	71	208	1210 Regular
Kankan KEROUANE Sibiribaro			Rural	2	230	1436 Standard
Kankan KOUROUSSA Banfele			Rural	15	317	2050 Regular
Kankan KOUROUSSA Doura			Rural	11	90	1030 Regular
Kankan MANDIANA Kantoumanina			Rural	9	93	803 Standard
Kankan MANDIANA Koundian			Rural	16	117	1003 Standard
kankan	SIGUIRI	Bankon	Rural	17	118	918 Standard
kankan	SIGUIRI	Kiniebakoura	Rural	20	95	952 Standard
kankan	SIGUIRI	Kintinian	Rural	35	200	1247 Regular
kankan	SIGUIRI	Niagassola	Rural	7	86	1666 Regular
Kankan MANDIANA Balandougouba			Rural	13	50	968RC
kankan	SIGUIRI	Siguiri-center	Rural	114	66	1191 CR
Kindia	DUBREKA	Khorira	Rural	15	192	1520 Regular
Kindia	DUBREKA	uncle	Rural	40	297	2471 Standard
Kindia	FORECARIAH Sikhourou		Rural	8	174	1589 Standard
Kindia	KINDIA	Friguiagbe	Rural	16	100	730 Standard
Kindia	KINDIA	Mambiya	Rural	1	177	1702 Standard
Kindia	KINDIA	Sougueta	Rural	38	236	1870 Standard
Kindia	TELIMELE	Kollet	Rural	2	201	1106 Regular
Kindia	TELIMELE	sarekaly	Rural	3	141	854 Standard
Kindia	TELIMELE	Thionthian	Rural	5	123	1014 Regular
Kindia	FORECARIAH Kallia		Rural	3	167	1473 CR

Labe	KOUBIA	Koubia center	Rural	5	133	924 Standard
Labe	LABE	Labe center	Rural	14	203	1069 Regular
Labe	LABE	Sannoon	Rural	24	129	1000 Regular
Labe	LELOUMA	Crazy	Rural	16	196	946 Regular
Labe	MALI	Balaki	Rural	9	115	959 Standard
Labe	MALI	Lebekere	Rural	2	221	984 Standard
Labe	MALI	Touba	Rural	6	160	1095 Regular
Labe	TOUGUE	Konah	Rural	1	141	1311 Standard
Labe	LABE	Diari	Rural	2	120	1011RC
Mamou	DALABA	Kankalabe	Rural	13	240	1337 Standard
Mamou MAMOU		Bouliwell	Rural	8	190	928 Standard
Mamou MAMOU		Poredaka	Rural	21	127	632 Standard
Mamou	PITA	Bantignel	Rural	4	158	773 Regular
Mamou	PITA	Ley Miro	Rural	8	148	623 Standard
Mamou	PITA	Sangareah	Rural	8	188	1119 Regular
Mamou	PITA	Timbi Touny	Rural	6	209	1034 Standard
Mamou MAMOU		Konkoure	Rural	12	241	1149 CR
N'Zérékoré BEYLA		Diarraguerela	Rural	4	146	1153 Regular
N'Zérékoré BEYLA		Sinko	Rural	48	229	2160 Regular
N'Zérékoré GUECKEDOU Kassadou			Rural	2	248	1190 Standard
N'Zérékoré GUECKEDOU Ouendé Kénéma Rural				31	118	516 Standard
N'Zérékoré LOLA		Foumbadou	Rural	13	120	825 Standard
N'Zérékoré LOLA		Lola center	Rural	28	263	1487 Regular
N'Zérékoré MACENTA Macenta center			Rural	49	212	1145 Standard
N'Zérékoré MACENTA Watanka			Rural	6	229	1222 Standard
N'Zérékoré NZEREKORE Koulé			Rural	16	150	1198 Standard
N'Zérékoré NZEREKORE Womey			Rural	4	195	1042 Standard
N'Zérékoré YOMOU		Bowe	Rural	11	87	529 Standard
N'Zérékoré BEYLA		Koumandou	Rural	13	109	1048RC
N'Zérékoré MACENTA Daro			Rural	2	305	1933RC
Boke	BOKE	Boke-Center	Urban	24	160	1285 Standard
Boke	BOKE	Kamsar	Urban	61	314	2408 Standard
Boke	BOKE	Sangaredi	Urban	4	265	1782 Regular
Boke	FRIA	Fria-Center	Urban	13	198	1228 Standard
Boke	KOUNDARA Koundara-Urban Center			2	218	1411 CR
Conakry CONAKRY Dixinn			Urban	16	165	1424 Standard
Conakry CONAKRY Dixinn			Urban	55	242	1668 Regular
Conakry CONAKRY Dixinn			Urban	97	283	2013 Regular
Conakry CONAKRY Kaloum			Urban	31	156	1051 Standard
Conakry CONAKRY Matam			Urban	20	231	1424 Standard
Conakry CONAKRY Matam			Urban	59	288	1935 Standard
Conakry CONAKRY Matam			Urban	102	171	1214 Standard
Conakry CONAKRY Matoto			Urban	33	192	1278 Standard
Conakry CONAKRY Matoto			Urban	71	171	1326 Regular
Conakry CONAKRY Matoto			Urban	112	233	1606 Regular
Conakry CONAKRY Matoto			Urban	153	92	808 Regular
Conakry CONAKRY Matoto			Urban	193	203	1596 Standard

Conakry CONAKRY Matoto		Urban	236	215	1535 Standard	
Conakry CONAKRY Matoto		Urban	316	225	1791 Standard	
Conakry CONAKRY Matoto		Urban	359	273	1989 Regular	
Conakry CONAKRY Matoto		Urban	402	307	2383 Standard	
Conakry CONAKRY Matoto		Urban	443	141	1113 Regular	
Conakry CONAKRY Matoto		Urban	487	114	875 Regular	
Conakry CONAKRY Ratoma		Urban	34	185	1166 Standard	
Conakry CONAKRY Ratoma		Urban	71	234	1410 Regular	
Conakry CONAKRY Ratoma		Urban	115	119	718 Standard	
Conakry CONAKRY Ratoma		Urban	196	309	1967 Regular	
Conakry CONAKRY Ratoma		Urban	231	429	2462 Standard	
Conakry CONAKRY Ratoma		Urban	267	157	1065 Standard	
Conakry CONAKRY Ratoma		Urban	341	249	1890 Standard	
Conakry CONAKRY Ratoma		Urban	376	244	1549 Standard	
Conakry CONAKRY Ratoma		Urban	414	195	1458 Standard	
Conakry CONAKRY Ratoma		Urban	456	134	1213 Standard	
Conakry CONAKRY Matoto		Urban	277	204	1473 CR	
Conakry CONAKRY Ratoma		Urban	160	194	1233 CR	
Conakry CONAKRY Ratoma		Urban	302	235	1774RC	
Faranah DINGUIRAYE Dinguiraye-urban center			7	128	1219 Standard	
Faranah FARANAH	Faranah-center	Urban	27	300	3010 Standard	
Faranah KISSIDOUGOU kissidougou Urban Center			15	165	1648 Standard	
Faranah KISSIDOUGOU kissidougou Urban Center			48	151	1273 Standard	
Faranah KISSIDOUGOU kissidougou Urban Center			78	425	2823 CR	
Kankan KANKAN	Kankan-center	Urban	29	105	846 Standard	
Kankan KANKAN	Kankan-center	Urban	68	188	1922 Standard	
Kankan KANKAN	Kankan-center	Urban	106	484	4110 Standard	
Kankan KOUROUSSA Kouroussa Urban Center			2	200	1823 Standard	
kankan	SIGUIRI	Siguiri-center	Urban	3	195	1518 Standard
kankan	SIGUIRI	Siguiri-center	Urban	70	341	3094 Regular
kankan	SIGUIRI	Siguiri-center	Urban	37	215	1662 CR
Kindia	COYAH	Maneah	Urban	2	155	1170 Regular
Kindia	COYAH	Maneah	Urban	32	339	2197 Standard
Kindia	COYAH	Maneah	Urban	63	302	2184 Standard
Kindia	DUBREKA	Dubreka-center	Urban	39	313	2193 Standard
Kindia	DUBREKA	Dubreka-center	Urban	82	227	1581 Standard
Kindia	FORECARIAH Forecareah Urban Center			1	199	1826 Standard
Kindia	KINDIA	Kindia center	Urban	30	168	1079 Standard
Kindia	KINDIA	Kindia center	Urban	75	203	1382 Standard
Kindia	TELIMELE	Telimele center	Urban	6	459	2624 Standard
Kindia	COYAH	Maneah	Urban	99	239	1664 CR
Labe	LABE	Labe center	Urban	80	261	1796 Standard
Labe	LABE	Labe center	Urban	103	345	2360 Standard
Labe	LABE	Labe center	Urban	56	219	1485 CR
Mamou MAMOU	Mamou center	Urban	43	209	1336 Standard	
Mamou	PITA	pita center	Urban	10	204	1069 Regular
Mamou MAMOU	Mamou center	Urban	14	151	860RC	

N'Zérékoré BEYLA		Beyla center	Urban	3	144	1057	Standard
N'Zérékoré GUECKEDOU	Guéckédou urban center			27	126	1068	Standard
N'Zérékoré LOLA		Lola center	Urban	9	156	898	Standard
N'Zérékoré MACENTA	Macenta center		Urban	24	142	805	Standard
N'Zérékoré NZEREKORE	N'Zérékoré urban center			13	517	3261	Standard
N'Zérékoré NZEREKORE	N'Zérékoré urban center			82	115	1144	Standard
N'Zérékoré NZEREKORE	N'Zérékoré urban center			119	172	1564	Standard
N'Zérékoré NZEREKORE	N'Zérékoré urban center			43	168	1436	CR

11.1.2. List of pilot survey EAs.

Region adm Prefecture		Under Milres Prefecture		Number EA	Households living in the EA	Population
Conakry	CONAKRY Dixinn		Urban	1	133	970
Conakry	CONAKRY Dixinn		Urban	2	250	1,528
Conakry	CONAKRY Dixinn		Urban	3	140	1,055
Conakry	CONAKRY Dixinn		Urban	4	137	891
Conakry	CONAKRY Dixinn		Urban	5	110	796
Conakry	CONAKRY Dixinn		Urban	6	194	1,480
Conakry	CONAKRY Dixinn		Urban	7	146	1,026
Conakry	CONAKRY Dixinn		Urban	8	174	1,309
Conakry	CONAKRY Dixinn		Urban	9	141	838
Conakry	CONAKRY Dixinn		Urban	10	160	1,080
Conakry	CONAKRY Dixinn		Urban	19	125	1,046
Conakry	CONAKRY Dixinn		Urban	20	132	672
Conakry	CONAKRY Dixinn		Urban	21	218	1,362
Conakry	CONAKRY Dixinn		Urban	22	234	1,648
Conakry	CONAKRY Dixinn		Urban	23	124	918
Conakry	CONAKRY Dixinn		Urban	24	195	1,484
Conakry	CONAKRY Dixinn		Urban	25	108	756
Conakry	CONAKRY Dixinn		Urban	26	193	1,340
Conakry	CONAKRY Dixinn		Urban	27	307	2014
Conakry	CONAKRY Dixinn		Urban	28	170	1,090
Conakry	CONAKRY Dixinn		Urban	29	167	1,018
Conakry	CONAKRY Dixinn		Urban	30	67	535
Conakry	CONAKRY Dixinn		Urban	31	165	1,270
Conakry	CONAKRY Dixinn		Urban	32	213	1,403
Conakry	CONAKRY Dixinn		Urban	33	185	1,372
Conakry	CONAKRY Dixinn		Urban	34	182	1,561
Conakry	CONAKRY Dixinn		Urban	35	154	902
Conakry	CONAKRY Dixinn		Urban	36	210	1,264
Conakry	CONAKRY Dixinn		Urban	37	143	770
Conakry	CONAKRY Dixinn		Urban	38	299	1,943
Conakry	CONAKRY Dixinn		Urban	39	304	1,913
Conakry	CONAKRY Dixinn		Urban	40	302	1,613
Conakry	CONAKRY Dixinn		Urban	41	260	1,619
Conakry	CONAKRY Dixinn		Urban	42	206	1,148
Conakry	CONAKRY Dixinn		Urban	43	267	1,533

Conakry	CONAKRY Dixinn		Urban	44	186	2,578
Conakry	CONAKRY Dixinn		Urban	45	403	2,772

Annex Table 2: Vaccination coverage according to the child health knowledge index and the standard of living of the household by place of residence.

			Vitamin A coverage		
			Nope	Yes	DK
			n %	n %	n %
Rural	Child Health Knowledge Index	No knowledge	87 22.7%	284 73.7%	14 3.7%
		knows only one	32 11.4%	249 88.2%	1 0.5%
		knows two	49 8.8%	506 90.8%	3 0.5%
		knows three	3 1.1%	230 98.9%	0 0.0%
		knows four	1 0.8%	163 99.2%	0 0.0%
	wealth level	Very poor	111 11.0%	885 88.1%	9 0.9%
		Poor	46 9.3%	442 88.9%	9 1.8%
		Medium	6 8.1%	73 91.9%	0 0.0%
		Rich	9 21.9%	32 78.1%	0 0.0%
Urban	Child Health Knowledge Index	No knowledge	77 36.6%	125 59.9%	7 3.4%
		knows only one	30 17.7%	137 81.0%	2 1.3%
		knows two	19 7.3%	230 90.2%	6 2.5%
		knows three	6 5.6%	107 93.8%	1 0.6%
		knows four	1 1.4%	98 97.9%	1 0.7%
	wealth level	Very poor	9 13.6%	51 81.8%	3 4.5%
		Poor	21 13.9%	123 82.7%	5 3.4%
		Medium	14 16.1%	73 82.3%	1 1.6%
		Rich	89 16.3%	450 82.2%	8 1.4%
Ensemble Child Health Knowledge Index		No knowledge	164 27.6%	409 68.8%	21 3.6%
		knows only one	62 13.7%	387 85.5%	3 0.8%
		knows two	67 8.3%	736 90.6%	9 1.1%
		knows three	9 2.6%	337 97.2%	1 0.2%
		knows four	3 1.0%	261 98.7%	1 0.3%
	wealth level	Very poor	119 11.2%	937 87.7%	12 1.1%
		Poor	67 10.4%	565 87.5%	14 2.2%
		Medium	21 12.3%	146 86.8%	1 0.8%
		Rich	98 16.7%	482 81.9%	8 1.3%

Table E10: Results of multivariate analyses.

rural environment

Equation variables								
		B	ES	Wald	dof	sig.	Exp(B)	
	Caregiver Vitamin A Knowledge Index							
Pitch 13m	No knowledge			30.197	4	0.000		SIGNIFICANT
	knows only one	-0.025	0.261	0.009	1	0.924	1 0.975	
	knows two	0.360	0.251	2.057	1	0.152	1.433	
	knows three	2.924	0.638	21.021	1	0.000	18.623	SIGNIFICANT
	knows four	1.739	0.577	9.094	1	0.003	5.691	SIGNIFICANT
	CM education level							
	uneducated			24.836	3	0.000		SIGNIFICANT
	primary	-0.011	0.347	0.001	1	0.975	1 0.989	
	Secondary	-1.543	0.321	23.177	1	0.000	0.214	SIGNIFICANT
	University	-0.727	0.483	2.264	1	0.132	0.483	
	Caregiver education level							
	uneducated			8.251	3	0.041		SIGNIFICANT
	primary	-0.182	0.348	0.274	1	0.600	1 0.834	
	Secondary	0.287	0.343	0.700	1	0.403	1.332	
	University	-1.219	0.547	4.960	1	0.026	0.296	SIGNIFICANT
	Caregiver's perception of vitamin A							
	Good			31.183	3	0.000	1	SIGNIFICANT
	Acceptable	0.269	0.751	0.129	1	0.720	1.309	
	Neutral	-1.468	0.277	28.079		0.000	0.230	SIGNIFICANT
	Bad	-2.002	0.927	4.667	1 1	0.031	0.135	SIGNIFICANT
	Place frequented for medical care of household members							

	Sanitary structure			0.000	3	1.000	1	
	Traditional healer	-1.081	0.459	5.544	1	0.019	0.339	SIGNIFICANT
	Street vendor	21.096	22306.713	0.000	1	0.999	#########	
	Other	22.160	9310.214	0.000	1	0.998	#########	
	Q5.1- Were you informed of the mass campaign which was held from January 07 to 14, 2022 before its start?(1)							SIGNIFICANT
	Nope					1.000	1,000	
	Yes	2,581	0.239	116.232	1	0.000	13,213	
	Caregiver age group							
	Under 20			25.190	11	0.009	1	SIGNIFICANT
	20 to 24	-1.242	0.680	3.336	1	0.068	0.289	SIGNIFICANT
	25 to 29	-0.543	0.690	0.618		0.432	0.581	
	30 to 34	-0.676	0.675	1.003	1	0.317	0.509	
	35 to 39	-0.600	0.664	0.818	1	0.366	0.549	
	40 to 44	-1.123	0.711	2.494	1	0.114	0.325	
	45 to 49	-1.566	0.754	4.315		0.038	0.209	SIGNIFICANT
	50 to 54	-0.956	0.766	1.560	1	0.212	0.384	
	55 to 59	-2.144	0.826	6.740	1	0.009	0.117	SIGNIFICANT
	60 to 64	-0.186	0.950	0.039	1	0.844	0.830	
	65 to 69	-2.309	0.871	7.027		0.008	0.099	SIGNIFICANT
	70 and over	-0.696	0.750	0.860	1	0.354	0.499	
	Declaration of the birth of the child to the civil status							
	Nope						1,000	
	Yes	0.689	0.216	10.174	1	0.001	1,991	SIGNIFICANT
	Main activity of the head of household							
	Public Sector Officer			37.948	9	0.000	1	SIGNIFICANT
	Private Sector Agent	0.861	0.642	1.798	1	0.180	2,366	
	Trader	0.765	0.559	1.874		0.171	2,150	
	Farmer	-1.228	0.558	4.844	1	0.028	0.293	SIGNIFICANT
	housewife (housewife)	-0.756	0.574	1.733	1	0.188	0.470	
	Craftsman/liberal activity	-0.840	0.495	2.886	1	0.089	0.432	SIGNIFICANT
	Unemployed/Unemployed	0.198	0.822	0.058		0.810	1.219	
	Retirement	3.620	1.859	3.794	1	0.051	37.338	SIGNIFICANT
	Pupil/Student	0.295	0.986	0.089	1	0.765	1.342	
	Other specify	0.819	0.656	1.561	1	0.212	2,269	
	Declaration of the birth of the child to the civil status							
	Male						1,000	
	Feminine	0.890	0.289	9,507	1	0.002	2,436	SIGNIFICANT
	Main activity of the person in charge of the child							
	Public Sector Officer			16.991	9	0.049		SIGNIFICANT
	Private Sector Agent	-1.262	0.824	2.349	1	0.125	1 0.283	
	Trader	-0.986	0.709	1.936	1	0.164	0.373	
	Farmer	0.518	0.738	0.492	1	0.483	1,678	
	housewife (housewife)	-0.291	0.704	0.170		0.680	0.748	
	Craftsman/liberal activity	-0.455	0.672	0.457	1	0.499	0.635	
	Unemployed/Unemployed	-0.764	0.998	0.586	1	0.444	0.466	
	Retirement	-2.829	1.943	2.119	1	0.145	0.059	
	Pupil/Student	18.627	9256.548	0.000	1	0.998	#########	
	Other specify	0.296	0.871	0.116	1	0.734	1.345	
	Who usually makes the decision whether or not your child benefits from VAS							
	Women			32.471	4	0.000	1	SIGNIFICANT
	husband/partner	1.403	0.247	32.224 4.068 4.114 2.702 1.247 2.007				SIGNIFICANT
	Grandparents	0.994	0.490		1	0.043		SIGNIFICANT
	Child's other parent	0.878	0.787		1	0.264		
	Someone else to specify	0.761	0.839	0.824 2.141	1	0.364		
	Constant	0.722	0.934	0.597 2.058	1	0.440		

has. Introduction of variables in step 1: Q5.1- Were you informed of the mass campaign held from January 7 to 14, 2022 before it started?
b. Introduction of variables in step 2: Child health knowledge index .
vs. Introduction of variables in step 3: Q11.5- Who usually makes the decision whether or not your child benefits from VAS?.
d. Introduction of variables in step 4: Q2.2_bis- Sex of the person in charge of the child.
e. Introduction of variables in step 5: Perception on vitamin A.
f. Introduction of variables in step 6: Q2.5- What is the main activity of the head of household?.
g. Introduction of variables in step 7: CM instruction level.
h. Introduction of variables in step 8: The child has been declared (variable created).
i. Introduction of variables in step 9: Age group of the person in charge of the children.
d. Introduction of variables in step 10: Place frequented for medical care.
k. Introduction of variables in step 11: Educational level of the person in charge of the child.
l. Introduction of variables in step 12: Q2.5_bis- What is ${name_person_dependent_child}'s main activity?.
Mr. Introduction of variables in step 13: Place frequented for medical care.

Equation variables

Place of residence		B	ES	Wald	dof	Sig.	Exp(B)	
RURAL Not 10d,r No knowledge				4.901				
	knows only one	-0.556	0.434	1.638	1	0.201	0.574	
	knows two	-0.455	0.391	1.357	1	0.244	0.634	
	knows three	18.950	2978.831	0.000	1	0.995	169738329,663	
	knows four	1,554	1,135	1.873	1	0.171	4,730	
	CM education level			12.012	3	0.007		SIGNIFICANT
	CM education level(1)	-1.226	0.444	7.645	1	0.006	0.293	SIGNIFICANT
	CM(2) education level	-1.332	0.506	6.923	1	0.009	SIGNIFICANT	0.264
	CM(3) education level	35.973	6670.433	0.000	1	0.996	#########	
	Educational level of person in charge of the child			9,823	3	0.020		SIGNIFICANT
	Level of education of the person in charge of the child(1)	1,470	0.540	7,422	1	0.006	4,349	SIGNIFICANT
	Level of education of the person in charge of the child(2)	1,275	0.717	3,165	1	0.075	3,580	SIGNIFICANT
	Level of education of the person in charge of the child(3)	-20.449	4346.921	0.000	1	0.996	0.000	
	Perception on vitamin HAS			8,853	3	0.031		SIGNIFICANT

		Perception on vitamin A(1)	0.548	1,186	0.213	1	0.644	1,729	
		Perception on vitamin A(2)	-1.206	0.428	7,928	1	0.005	0.299	SIGNIFICANT
		Perception on vitamin A(3)	0.537	1,336	0.162	1	0.688	1,711	
		Place frequented for medical care			0.000	3	1.000		
		Place frequented for medical care(1)	-1.325	0.397	11,129	1	0.001	0.266	SIGNIFICANT
		Place frequented for medical care(2)	21.080	23158.859	0.000	1	0.999	1428970478.372	
		Place frequented for medical care(3)	21,622	9659.218	0.000	1	0.998	2456222543.408	
		Q5.1 - Were you informed of the mass campaign which was held from January 07 to 14, 2022 before its start?(1)	3,101	0.368	71,091	1	0.000	22,216	SIGNIFICANT
		Q2.2 - Gender of Head of Household(1)	-1.074	0.451	5,676	1	0.017	0.342	SIGNIFICANT
		Q2.5 - What is the main activity of the Head of Household?			24,380	9	0.004		SIGNIFICANT
		Q2.5 - What is the main activity of the Head of Household?(1)	-14.736	4346.921	0.000	1	0.997	0.000	
		Q2.5 - What is the main activity of the Head of Household?(2)	-15.878	4346.920	0.000	1	0.997	0.000	
		Q2.5 - What is the main activity of the Head of Household?(3)	-17.352	4346.920	0.000	1	0.997	0.000	
		Q2.5 - What is the main activity of the Head of Household?(4)	-14.673	4346.921	0.000	1	0.997	0.000	
		Q2.5 - What is the main activity of the head of household?(5)	-18.173	4346.920	0.000	1	0.997	0.000	
		Q2.5 - What is the main activity of the Head of Household?(6)	2,303	9453.407	0.000	1	1,000	10,002	
		Q2.5 - What is the main activity of the Head of Household?(7)	0.948	10147.542	0.000	1	1,000	2,581	
		Q2.5 - What is the main activity of the head of household?(8)	4.300	12822.209	0.000	1	1,000	73,697	
		Q2.5 - What is the main activity of the Head of Household?(9)	-15.233	4346.921	0.000	1	0.997	0.000	
		Q11.11 - Have you heard someone in your entourage, neighborhood object to the SVA? (1)	-1.786	0.645	7,677	1	0.006	0.168	SIGNIFICANT
		Constant	18,561	4346.920	0.000	1	0.997	115116579,874	
URBAN Not	10d,r	Child Health Knowledge Index			18,726	4	0.001		SIGNIFICANT
		Child Health Knowledge Index (1)	0.173	0.339	0.259	1	0.611	1,189	
		Child Health Knowledge Index (2)	0.814	0.334	5.935	1	0.015	2,257	SIGNIFICANT
		Child Health Knowledge Index (3)	2,146	0.681	9.932	1	0.002	8,554	SIGNIFICANT
		Child Health Knowledge Index (4)	2,037	0.692	8,668	1	0.003	7,667	SIGNIFICANT
		CM education level			16,116	3	0.001		SIGNIFICANT
		CM education level(1)	1.352	0.573	5,576	1	0.018	SIGNIFICANT 3.865	
		CM(2) education level	-0.851	0.390	4,768	1	0.029	0.427 SIGNIFICANT	
		CM(3) education level	-0.951	0.525	3,274	1	0.070	0.386 SIGNIFICANT	
		Educational level of the person in charge of the child			10,474	3	0.015		SIGNIFICANT
		Level of education of the person in charge of the child(1)	-1.564	0.515	9,208	1	0.002	0.209	SIGNIFICANT
		Level of education of the person in charge of the child(2)	-0.048	0.380	0.016	1	0.899	0.953	
		Level of education of the person in charge of the child(3)	-0.694	0.539	1,658	1	0.198	0.500	
		Perception on vitamin HAS			14,078	3	0.003		SIGNIFICANT

		Perception on vitamin A(1)	0.626	0.855	0.536	1	0.464	1,870	
		Perception on vitamin A(2)	-1.367	0.375	13,313	1	0.000	0.255	SIGNIFICANT
		Perception on vitamin A(3)	-22.617	19812.832	0.000	1	0.999	0.000	
		Q5.1- Were you informed of the mass campaign which was held from January 07 to 14, 2022 before its start?(1)	2007	0.314	40,757	1	0.000	7,442	SIGNIFICANT
		Q2.5- What is the main activity of the Head of Household?			23,089	9	0.006		SIGNIFICANT
		Q2.5- What is the main activity of the Head of Household?(1)	0.314	0.592	0.281	1	0.596	1,369	
		Q2.5- What is the main activity of the head of household?(2)	0.365	0.585	0.390	1	0.532	1,441	
		Q2.5- What is the main activity of the Head of Household?(3)	0.557	1,271	0.192	1	0.661	1,746	
		Q2.5- What is the main activity of the head of household?(4)	-1.041	0.637	2,670	1	0.102	0.353	
		Q2.5- What is the main activity of the head of household?(5)	-0.552	0.568	0.943	1	0.332	0.576	
		Q2.5- What is the main activity of the head of household?(6)	0.180	0.684	0.069	1	0.792	1,197	
		Q2.5- What is the main activity of the head of household?(7)	1,787	1,292	1,913	1	0.167	5.974	
		Q2.5- What is the main activity of the head of household?(8)	-1.357	1,198	1,282	1	0.257	0.257	
		Q2.5- What is the main activity of the head of household?(9)	1,179	0.680	3,008	1	0.083	3,252	SIGNIFICANT
		Constant	-0.998	0.838	1.421	1	0.233	0.368	
		Wealth level Wealth			7.929	3	0.048	1	SIGNIFICANT
		level(1)	0.114	0.544	0.044	1	0.833	1.080	1,121
		Wealth level(2)	-1.044	0.596	3.068	1	0.080	0.352	SIGNIFICANT
		Wealth level(3)	0.066	0.517	0.016	1	0.899	1.002	1,068
		The child has been declared (created variable)(1)	1.007	0.320	9.901			2,738	SIGNIFICANT
		Q2.2_bis- Sex of the person in charge of the child(1)	0.856	0.293	8,520	1	0.004	2,354	SIGNIFICANT
		Q11.5- Who usually makes the decision whether or not your child benefits from VAS?			21,670	4	0.000		SIGNIFICANT
		Q11.5- Who usually makes the decision whether or not your child benefits from VAS? (1)	1,323	0.310	18,219	1	0.000	3,753	SIGNIFICANT
		Q11.5- Who usually makes the decision whether or not your child benefits from VAS? (2)	0.099	0.425	0.054	1	0.816	1,104	
		Q11.5- Who usually makes the decision whether or not your child benefits from VAS? (3)	0.089	0.914	0.009	1	0.922	1,093	
		Q11.5- Who usually makes the decision whether or not your child benefits from VAS? (4)	0.858	1,118	0.589	1	0.443	2,357	

has. Introduction of variables in step 1: Q5.1- Were you informed of the mass campaign held from January 7 to 14, 2022 before it started?

b. Introduction of variables in step 2: Place frequented for medical care.

vs. Introduction of variables in step 3: Q2.5- What is the main activity of the head of household?.

d. Introduction of variables in step 4: Child health knowledge index .

e. Introduction of variables in step 5: Educational level of the person in charge of the child.

f. Introduction of variables in step 6: CM instruction level.

g. Introduction of variables in step 7: Place frequented for medical care.

h. Introduction of variables in step 8: Q11.11- Have you heard someone in your entourage, neighborhood oppose the SVA?.

i. Introduction of variables in step 9: Q2.2- Gender of Head of Household.

d. Introduction of variables in step 10: Perception on vitamin A.

k. Introduction of variables in step 2: Child health knowledge index .

I. Introduction of variables in step 4: Perception on vitamin A.

Mr. Introduction of variables in step 5: CM instruction level. not.	
Introduction of variables in step 6: Q11.5- Who usually makes the decision whether or not your child benefits from VAS?. y. Introduction of variables in step 7: Q2.2_bis- Sex of the person in charge of the child. p. Introduction of variables in step 8: The	
child has been declared (variable created). q. Introduction of variables in step 9: Educational level of the person in charge of the	
child. r. Introduction of variables in step 10: Level of wealth.	

11.2. Questionnaires

HOUSEHOLD QUESTIONNAIRE

PECS SURVEY

HOUSEHOLD QUESTIONNAIRE

The information contained in this questionnaire is confidential. They are covered by statistical confidentiality and can only be published in anonymous form in accordance with law no. 2013-537 of July 10, 2013 on the organization of the National Statistical System.

TO READ AT THE SURVEY

Hello Madam/Sir, My name is
We have come on behalf of the Ministry of Health to talk about child health in your community.
With the support of Helen Keller International and other partners, the government provided vitamin A supplementation, deworming and malnutrition screening for children last week. We come to see how it went. We would like to ask you some questions about these health services.

These questions should only take a short time (30 minutes maximum). By participating, you will provide valuable information on how to improve health services in your area. You are free to choose to participate or not, you are also free to refuse to answer any of the questions. However, your opinion is very important in this study. Your answers will remain confidential. We do not collect any information that could identify you such as your name, address or telephone number. Do you want to participate? Yes (continue) No

END ☐ → ☐

Household identification number: *Kind* E VS | *Cluster* ☐☐☐ | *Housework* ☐☐☐

Q1: GENERAL INFORMATION

No. QUESTIONS		ANSWERS	CODES
Q1.1	Stratum		
Q1.2	Health region		
Q1.3	Health district		
Q1.4	locality		
Q1.5	Area	1= rural 2= urban	
Q1.6	ZD or cluster number		
Q1.7	Household identification number		
Q1.8	Investigator code		
Q1.9	team code		
Q1.10	**Survey** date	/_____/_____/_____/ (day) (month year)	

Q2: RESPONDENT PROFILE

N° QUESTIONS Q2.1		ANSWERS	CODES
Family	relationship with the child	1=Father 2= Mother	

		3= Uncle 4= Aunt 5= Guardian 6= Guardian 7= Grandfather 8=Grandmother 9=Servant 10= Other (Specify)……	
HEAD OF HOUSEHOLD			
Q2.2 Sex		1=Male 2=Female	|_____|
Q2.3 How old are you?		/_____/years 999=Don't know	|_____|
Q2.4	What is your level of school education?	1=No schooling 2=Primary 3=Secondary 4=Higher	|_____|
Q2.5	What is your main activity?	1= Public sector employee 2= Private sector agent 3=Trader 4=Farmer 5=Housewife (housewife) 6= Craftsman/liberal activity 7= Unemployed/Unemployed 8= Retired 9= Pupil/Student 99= Other to be specified_____	|_____|
CAREGIVER			
Q2.6 Sex		1=Male 2=Female	|_____|
Q2.7 How old are you?		/_____/years 999=Don't know	|_____|
Q2.8	What is your level of school education?	1=No schooling 2=Primary 3=Secondary 4=Higher	|_____|
Q2.9	What is your main activity?	1= Public sector employee 2= Private sector agent 3=Trader 4=Farmer 5=Housewife (housewife) 6= Craftsman/liberal activity 7= Unemployed/Unemployed 8= Retired 9= Pupil/Student 99= Other to be specified_____	|_____|

Q3: CHARACTERISTICS OF THE HOUSEHOLD

No.	QUESTIONS	ANSWERS	CODES
Q3.1	What is the main source of water you drink in the household?	1=Tap water (private) 2= Tap water (public) 3=Public protected well 4=Private protected well 5= Public unprotected well 6= Private unprotected well	|_____|

		7=Surface water (lake, river, pond, stream…) 8=Purchase of packaged water 9=Drilling 99=Other, specify:……..	
Q3.2	What type of toilet do members of your household usually use?	1=In nature 2=Public latrine 3=Private latrine 4=Traditional public latrine 5=Private traditional latrine 6=Modern public flush toilets 7= Modern private flush toilets 99=Other ……..	|_____|
Q3.3	What types of fuels do you use to cook?	1=Firewood 2=Coal 3=Gas 99=Other	

No.	**QUESTIONS**	**ANSWERS**	**CODES**
Q3.4	Main construction materials of the walls of the house (according to your observation)	1=Military house 2=Wooden house 3=Cement house 99=Other: …….	|___|
Q3.5	Main construction materials of the house roof (according to your observation)	1=Sheet metal 2=Concrete (slab) 3=In tiles 4=Budding 99=Other …….	|___|
Q3.6	Main construction materials of the house floor (according to your observation)	1=Down 2=Cement 3=Checked 4=Floor 99=Other	|___|
Q3.7	Do you or someone in the household have any of the following items in working order?	1=Radio 2=TV 3=Phone 4=Motorcycle 5=Bike 6=Car or Truck 7=Fan 8=Air conditioner 99=Other …….	|___|

Q4: ACCESS TO HEALTH SERVICES

N°	**QUESTIONS** Where	**ANSWERS**	**CODES**
Q4.1	do you go most often to obtain medical care?	1=Public health center 2=Private health center 3=Pharmacy	|___|

		4=Traditional practitioner 99=Others……..	
Q4.2	Have you ever taken your child to the health center just to receive one of the following services?	1=Vaccination 2=Vitamin A supplementation 3=Growth monitoring (weighing) 99=Other ……	

Q5: CAMPAIGN COMMUNICATION STRATEGY

No. QUESTIONS		ANSWERS	CODES
Q5.1	Were you informed of the mass campaign from **July 26 to August 6, 2020)** before it started **(before July 26)?**	1= Yes 0= No (go to Q6.1)	

No. QUESTIONS		ANSWERS	CODES
Q5.2	How were you informed about the campaign? *(Several answers possible; circle the code(s) then add up)*	1= Town criers 2= Mobilizers 3= Health workers 4= UPS 5= Voluntary 6= Word of mouth 7= No one in the household 8= Neighborhood 9= Radios 10= Television 11= Posters 12= Opinion Leaders 13= Others _____	
Q5.3	What is the most credible source of information about the health of your children	1= Town criers 2= Mobilizers 3= Health workers 4= UPS 5= Voluntary 6= Word of mouth 7= No one in the household 8= Neighborhood 9= Radios 10= Television 11= Posters 12= Opinion Leaders 13= Others _____	

Q6: LEVEL OF KNOWLEDGE OF VITAMIN A

No. QUESTIONS		ANSWERS	CODES

Q6.1	Do you know what this product is called? (Vitamin A) **(show the 2 types of vitamin A capsules or photo)**	1= Yes 0= No	
Q6.2	Do you know what this product is for? (strengthening of the immune system, prevention of twilight blindness)	1= Prevents blindness/helps vision (see well) 2= Promotes growth 3= Protects against diseases 4=Protects against anemia 5=Reduces risk of death 6=Improves children's health 7= Don't know 99= Others_____	
Q6.3	At what age should children receive their first dose of vitamin A?	1= Less than 6 months 2= At 6 months 3= More than 6 months 4=Don't know 99=Other ……..	
Q6.4	How many times per year should a child receive vitamin A per year?	1= 1 time 2= 2 times 3= 3 times 4= Don't know 99= Other	
Q6.5	Who/Where did you get your vitamin A knowledge from?	1=Health workers 2=ASC 3=Radio/TV 99=Other ……	

Q7: DECISION TO HAVE A CHILD BENEFIT FROM VAS.

No.	QUESTIONS	ANSWERS	CODES
Q7.1	Who usually makes the decision whether or not your child benefits from the SVA – you, your (husband/partner), you and your (husband/partner) jointly, or someone else?	1= Respondent 1 2= Husband/partner 2 3= Respondent and husband/partner jointly 3 99= Someone else to specify ……	
Q7.2	If the caregiver answers husband/partner or someone else to question M2, ask: When your husband/partner/someone else makes the decision whether or not your child will benefit from VAS, are you able to give your opinion on the decision taken?	1= Yes, I can give my opinion on the decision taken 0= No, I cannot give my opinion on the decision made 3= Don't know	

Q8: QUALITY OF VITAMIN A ADMINISTRATION ACTIVITIES.

N° QUESTIONS What		**ANSWERS**	**CODES**
Q8.1	did the administrator tell you about the vitamin A he gave to your children? *(Several answers possible; circle the code(s) then add up)*	1= Protect view 2= Growth 4= Good nutrition 8= He didn't say anything 99= Others _____	|____|
Q8.3	Did the administrative agent mark your child's finger?	1= Yes 0= No	|____|
Q8.4	Has the administrator agent marked your household?	1= Yes 0= No 3= Don't know	|____|
Q8.5	Has the household been marked correctly ? (Investigator observation)	1= Yes 0= No	|____|

PECS SURVEY

CHILDREN'S QUESTIONNAIRE

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TO READ AT THE SURVEY

Hello Madam/Sir, My name is
We have come on behalf of the _____, Ministry of Health to talk about child health in your community.
With the support of Helen Keller International and other partners, the government provided vitamin A supplementation, deworming and malnutrition screening for children last week. We come to see how it went. We would like to ask you some questions about these health services.

These questions should only take a short time (30 minutes maximum). By participating, you will provide valuable information on how to improve health services in your area. You are free to choose to participate or not, you are also free to refuse to answer any of the questions. However, your opinion is very important in this study. Your answers will remain confidential. We do not collect any information that could identify you such as your name, address or telephone number. Do you want to participate? Yes (continue) No

END ☐ → ☐

Household identification number: *Kind* E VS = = *Cluster* ☐☐☐ = = = *Housework* ☐☐☐ = = =

Q1: GENERAL INFORMATION

No.	QUESTIONS	ANSWERS	CODES
Q1.1	Stratum		|____|
Q1.2	Health region		|____|
Q1.3	Health district		|____|
Q1.4	locality		|____|
Q1.5	Area	1= rural 2= urban	|____|
Q1.6	ZD or cluster number		|____|
Q1.7	Household identification number		|____|____|____|
Q1.8	Investigator code		|____|____|
Q1.9	team code		|____|____|
Q1.10	**Survey** date	/_____/_____/_____/ (day) (month year)	|____|____|____|
Q1.11	How many children from 6-59 months live in your household? *Assign a number to each child from oldest to youngest*	Number of children: _____ (enter the number)	|____|

Q2: VITAMIN A SUPPLEMENTATION

No.	QUESTIONS	ANSWERS	Child 1	Child 2	Child 3	Child 4	child tn
Q2.0	**Relationship to child (Relation between respondent and child)**	**1= Child's biological parent (Father, mother)** **2= Big brother, sister** **3= Grandparent** **99= Other relative** **88= No relationship (domestic, etc=**					
Q2.1	What is the sex of the child?	1=Male 2=Female					
Q2.2	What is the child's date of birth?	Date must be within……(update based on campaign date)					
	If date, not known, Age in months of the child	…….. age in months					
Q2.3	What is the source of this information?	1=Health record 2=Birth certificate 3=Calendar of events 4=Other to be specified					
Q2.4	During the last campaign **(07 to 14 January 2022)** which has just ended, did the child receive vitamin A? **(Show vitamin A capsules or photo)**	1=Yes 0=No 3=Don't know					
Q2.5	If yes where did he receive it (place)?	1=Here at home 2= CHW home 3=Village health center 4=At the health center outside the village 5=School/Church/Mosque 6=Street/market 7=Other place in village/neighbourhood 8=Other place outside the village 9=Don't know 99=Other, specify					
Q2.6	If not, why did the child not receive this product during this campaign?	1= the child was absent 2= agents did not pass 3= agents are no longer ironed 4= not informed 5= the child was sick 6= refusal, 7= lack of products 8 = There was no campaign in our region 9= The trip was too long 10= The trip was too expensive 11= Too much work at home 12= There was no one to bring the child 13= No time to bring the child 14= The family decision maker refused to allow the child to receive it 15 = don't know/can't remember 99=Other, specify					
Q2.7	Who accompanied the child to receive VAS during the most recent campaign?W	1= The mother of the child 2= The father of the child 3= The child's sister 4= The child's brother 5= The child's grandmother 6= The child's grandfather 7= Another woman in the family or a friend					

		8= Another man in the family or a friend					
Q2.8	Was the health worker who administered the vitamin A capsule to your child male or female?	1= Male 2= Female 3= Don't know					

Q3: TIME ASSOCIATED WITH VAS SERVICES

these questions if at least 1 household child in Ask has receipt VAS during last the

No.	QUESTIONS	ANSWERS	Child 1	Child 2	Child 3	Child 4	Childhood nt n
Q3.1	Before receiving vitamin A, were you informed that the AD7 would come to your home to supplement the child? (It was expected ?)	1=Yes 0=No ÿ Q3.4					
Q3.2	Did you wait at home for the arrival of the CHW to supplement the child with Vitamin A?	1=Yes 0=No ÿ Q3.4					
Q3.3	How long did you wait for the CHW to arrive to supplement the child?	1=1 hour or less 2=2-3 hours 3=half a day 4=All day 99 = Other					
Q3.4	How long did it take you to get to the place where the child received vitamin A? *(The place noted in question Q8.5)*	5=30 minutes or less 1=1 hour 2=2-3 hours 3=half a day 4=All day 99= Other					
Q3.5	Did you pay for transportation to where the child received vitamin A?	1=Yes 0=No ÿ Q3.7					
Q3.6	How much did you pay? (For the round trip, together)	[amount in GNF]					
Q3.7	Did you wait before receiving Vitamin A?	1=Yes 0=No ÿ Q3.9					
Q3.8	How long did you wait?	1=1 hour or less 2=2-3 hours 3=half a day 4=All day 99= Other					
Q3.9	Did you receive any other services at the reception of Vitamin A?	1=Yes 2=No ÿ Next Section					
Q3.10	Which ?	1=Child deworming 2=Screening of children for malnutrition 3=Information on children's diet 4=Treatment for a disease					

[7] Distributor Agent

		5=Family planning 6=Child growth monitoring 99=Other					
Q3.11	In total, how long did it take for your child to receive their vitamin A? NOTE: THIS INCLUDES DURATION THE JOURNEY FOR YOU GO TO THE SITE, FOR RECEIVE THE VITAMIN A AND FOR RETURN TO THE HOME	1= Less than an hour 2= Between 1 and 2 hours 3= Between 2 and 4 hours 4= Between 4 and 6 hours 5= More than 6 hours					

Q4: Declaration of the child's birth in the civil registry.

No.	QUESTIONS	ANSWERS	Child 1	Child 2	Child 3	Child 4	Childhood nt n
Q4.1	(Name) DOES HE/SHE HAVE A BIRTH CERTIFICATE/ACT?	1=Yes, seen 2=Yes not seen 3=No, no birth certificate or act 9= Don't know					
Q4.2	HAS (name)'S BIRTH BEEN REGISTERED/DECLARED WITH THE CIVIL STATUS?	1=Yes, seen 2=No 3= Don't know					
Q4.3	WHAT MAIN REASON DID YOU NOT REGISTER (NAME) IN CIVIL STATUS?	1=Town hall too far 2=No money to do it 3=Laziness 4=Not important 5=Don't know					

HEALTH WORKER QUESTIONNAIRE

NUTRITION INTERNATIONAL
Nourish Life

PECS SURVEY

HEALTH WORKER QUESTIONNAIRE

The information contained in this questionnaire is confidential. They are covered by statistical confidentiality and can only be published in anonymous form in accordance with law no. 2013-537 of July 10, 2013 on the organization of the National Statistical System.

TO READ AT THE SURVEY

Hello Madam/Sir, My name is
We are researching the health _____, services provided by your health center on vitamin A supplementation in children. We would like to ask you some questions about these health services. The questions should only last a short time (15-20 minutes). Your opinion will help plan health activities in your community for mothers and children.
You are free to choose to participate or not, you are also free to refuse to answer any of the questions. However, your opinion is very important in this study. Your answers will remain confidential. Do you want to participate? Yes (continue)
Nope END

Q1: GENERAL INFORMATION

No.	QUESTIONS	ANSWERS	CODES
Q1.1	Stratum		|____|
Q1.2	Health region		|____|
Q1.3	Health district		|____|
Q1.4	locality		|____|
Q1.5	Health area / health center		|____|
Q1.6	Type of health facility (CSR, CSU, etc.)		|____|
Q1.7	Area	1= urban 2= rural	|____|
Q1.8	ZD or cluster number		|____|
Q1.9	Investigator code		|____|____|
Q1.10	Team code		|____|____|
Q1.11	**Survey** date	/_____/_____/_____/ (day) (month year)	|____|____|____|

Q2: RESPONDENT PROFILE

No.	QUESTIONS	ANSWERS	CODES
Q2.1	Gender	1=Male 2=Female	|___|
Q2.2	What is your role in the health facility?	1=Nurse 2=Caregiver 3=Doctor 4=EPI agent 5= Room girl/boy 6=Senior Health Technician 99= Other, specify	|___|
Q2.3	How many years of experience do you have in healthcare in general?	_____ (in years)	|___|

Q3: KNOWLEDGE ABOUT VITAMIN A AND ABOUT VITAMIN A SUPPLEMENTATION
VITAMIN A

No.	QUESTIONS	ANSWERS	CODES
Q3.1	What are your sources of information on vitamin A?	1= MSHP documents 2= local NGO 3= Continuous training 4= TV/Radio/Newspapers 5= Poster, leaflet, technical sheet 6= Colleagues 7= Don't know 99= Other, specify	|___|
Q3.2	Have you received training on vitamin A?	1=Yes 0=No	
Q3.3	How long ago did you last receive Vitamin A training?	1=Less than 3 months 2=3 to 6 months 3=7 to 12 months 4=More than 1 year 6= I don't remember	|___|
Q3.4	How long did the Vitamin A training take?	1=Less than half a day 2=Half a day 3=One day 4=Two days 99=Others	
Q3.5	Were you paid for your time during the training?	1=Yes 0=No ÿQ3.7	
Q3.6	If yes, how much did you receive?		
Q3.7	What are the benefits of vitamin A?	1= Prevent disease 2= Encourage growth 3= Prevent blindness/promote vision 4= Improve health 5= Reduce the risk of death 6= Prevent anemia 7= Increase appetite	|___|

		8= Don't know, don't remember 99= Other, specify	
Q3.8	At what age should children receive vitamin A for the first time?	1= At birth 2= At 6 months 3= At 9 months 4= At 1 year 5= I don't know 99= Other, specify	

No.	QUESTIONS	ANSWERS	CODES
Q3.9	How often do children 6-59 months should they receive vitamin A supplementation?	1= During campaigns 2= Every 3 months 3= Every 6 months 4= Every 12 months 5= Every day 6= I don't know 99= Other, specify _____	
Q3.10	What is the dosage of vitamin A for children 6-11 months?	1= One blue capsule 100,000 IU 2= One red capsule 200,000 IU 3= Half of the blue capsule 100,000 IU 4= Half of the 200,000 IU red capsule 5= I don't know 99= Other, specify _____	
Q3.11	What is the dosage of vitamin A for children 12-59 months?	1= One blue capsule 100,000 IU 2= One red capsule 200,000 IU 3= 2 blue capsules 100,000 IU 4= 2 red capsules 200,000 IU 5= I don't know 99= Other, specify _____	
Q3.12	Do you have material (Information Education and Comm) that talks about Vitamin A?	1= Yes 0= No	
Q3.13	Which IEC materials did you use during the last campaign?	1= Picture box 2= Training module 3= Vitamin A Poster 4= National vitamin A administration protocol 5= Data sheet 99= Other, specify _____	

Q5: QUALITY OF CAMPAIGN ACTIVITIES

No.	QUESTIONS	ANSWERS	CODES
Q5.1	For how many days did you participate in the campaign in your District?	_____ (in days)	|___|
Q5.1b	Approximately how long per day?	1=1 hour or less 2=2-3 hours 3=half a day 4=All day 99= Other	
Q5.2	How much did you receive as remuneration per day of work?	_____ (in GNF/day)	|___|
Q5.3	What role did you play during the campaign?	1= Social mobilization 2= Distribution of Vit A 3= Recording 4= Supervisor 5= Compile data 6= Malnutrition screening 7= Logistician 99= Others _____	|___|
Q5.4	Were there any problems with the vitamin A supply during the campaign?	1= Yes 0= No	|___|
Q5.5	If YES, have these issues been resolved?	1= Yes 0= No 3= Don't know	|___|

thanks for your help

RECO or Distributor Questionnaire
Community

NUTRITION INTERNATIONAL
Nourish Life

COVERAGE SURVEY
DISTRIBUTOR AGENT QUESTIONNAIRE

The information contained in this questionnaire is confidential. They are covered by statistical confidentiality and can only be published in anonymous form in accordance with law no. 2013-537 of July 10, 2013 on the organization of the National Statistical System.

TO READ AT THE SURVEY

Hello Madam/Sir, My name is _____, I am from the Ministry of Health. We conduct health services research on vitamin A supplementation in children. We would like to ask you some questions about these health services. The questions should only last a short time (15-20 minutes). Your opinion will help plan health activities in your community for mothers and children.

You are free to choose to participate or not, you are also free to refuse to answer any of the questions. **However, your opinion is very important in this study. Your answers will remain confidential. Do you want to participate? Yes (continue)**

Nope ☐ ↓ END ☐→

Please ensure that the health worker has participated in the campaign before starting the questionnaire

Q1: GENERAL INFORMATION

No.	QUESTIONS	ANSWERS	CODES
Q1.1	Stratum		|____|
Q1.2	Health region		|____|
Q1.3	Health district		|____|
Q1.4	locality		|____|
Q1.5	Health area / health center		|____|
Q1.6	Type of health facility (CSR, CSU, etc.)		|____|
Q1.7	Area	1= rural 2= urban	|____|
Q1.8	ZD or cluster number		|____|
Q1.9	Investigator code		|____|____|
Q1.10	Team code		|____|____|
Q1.11	**Survey** date	/_____/_____/_____/ (day) (month year)	|____|____|____|

Q2: RESPONDENT PROFILE

No.	QUESTIONS	ANSWERS	CODES
Q2.1	Gender	1=Male 2=Female	|____|
Q2.2	Your level of studies	1= No schooling 2= Primary 3= Lower secondary 4= Upper secondary 5= Superior	|____|
Q2.3	How long have you been an ASC?	_____ (in years)	|____|

Q3: KNOWLEDGE ABOUT VITAMIN A AND ABOUT VITAMIN A SUPPLEMENTATION
VITAMIN A

N°	QUESTIONS Have	ANSWERS	CODES
Q3.1	you received training on vitamin A?	1= Yes 0= No	|____|
Q3.2	If YES, how long ago did you last receive Vitamin A training?	1=Less than 3 months 2=3 to 6 months 3=7 to 12 months 4=More than 1 year 5= I don't remember	|____|
Q3.3	How long have you been training on vitamin A? Vitamin A training, how long did it take?	1=Less than half a day 2=Half a day 3=One day 4=Two days 99=Others	
Q3.4	Were you paid for your time during the training?	1=Yes 0=No ÿQ3.6	
Q3.5	If yes, how much did you receive?		
Q3.6	What are the benefits of vitamin A?	1= Prevent disease 2= Encourage growth 3= Prevent blindness/promote vision 4= Improve health 5= Reduce the risk of death 6= Prevent anemia 7= Increase appetite 8= Don't know, don't remember 99= Other, specify _____	|____|
Q3.7	At what age should children receive vitamin A for the first time?	1= At birth 2= At 6 months 3= At 9 months 4= At 1 year 8= I don't know 99= Other, specify _____	|____|
Q3.8	How often do children 6-59 months should they receive	1= During campaigns 2= Every 3 months 3= Every 6 months	|____|

	vitamin A supplementation?	4= Every 12 months 5= Every day 6= I don't know 99= Other, specify _____	
Q3.9	What is the dose of vitamin A for children 6-11 months?	1= One blue capsule 100,000 IU 2= One red capsule 200,000 IU 3= Half of the blue capsule 100,000 IU 4= Half of the 200,000 IU red capsule 5= I don't know 99= Other, specify _____	

No.	**QUESTIONS**	**ANSWERS**	**CODES**
Q3.10	What is the dose of vitamin A for children 12-59 months?	1= One blue capsule 100,000 IU 2= One red capsule 200,000 IU 3= 2 blue capsules 100,000 IU 4= 2 red capsules 200,000 IU 5= I don't know 99= Other, specify _____	
Q3.11	Where did you get the information on vitamin A?	1= MSHP documents 2= local NGO 3= Continuous training 4= TV/Radio/Newspapers 5= Poster, leaflet, technical sheet 6= Colleagues 7= Don't know 99= Other, specify	

Q5: QUALITY OF CAMPAIGN ACTIVITIES

No.	**QUESTIONS**	**ANSWERS**	**CODES**
Q5.1	For how many days did you participate in the campaign in your village?	_____ (in days)	
Q5.1b	About how many times per day did you participate in the campaign in your village?	1=1 hour or less 2=2-3 hours 3=half a day 4=All day 99= Other	
Q5.2	Can you name the items distributed during the last campaign?	1= Vitamin A capsules 2= Polio vaccine 3= Other vaccines 99= Others_____	
Q5.3	Did you receive a motivation **no** funding for your campaign work?	1= Yes 0= No	
Q5.4	If YES, what types of non-financial motivation did you receive?	1= T-shirts 2= Cap	

		99= Other _____	
Q5.5	What role did you play during the campaign?	1= Social mobilization 2= Distribution of Vit A 3= Recording 4= Supervisor 5= Compile data 6= Malnutrition screening 7= Logistician 99= Others _____	|_____|
Q5.6	Were there any problems with the vitamin A supply during the campaign?	1= Yes 0= No	|_____|
Q5.7 If YES, have these issues been resolved?		1= Yes 0= No 3= Don't know	|_____|
Q5.10	Did a supervisor visit you during the campaign?	1= Yes 0= No	|_____|
Q5.11	How do you think vitamin A supplementation could be improved in your area?	1= Media campaigns 2= Sensitization of heads of household 3= Better coordination between community and health staff 4= Ensure a sufficient and prompt supply of Vit A 5= Regular training of Officers 6= Motivation of health workers 7= Motivation of CHWs and volunteers 8= Don't know 9= Other _____	|_____|

thanks for your help

Monitoring and quality control form for supervisors

NUTRITION INTERNATIONAL
Nourish Life

PECS SURVEY

Monitoring and Quality Control Form for Supervisors

The information contained in this questionnaire is confidential. They are covered by statistical confidentiality and can only be published in anonymous form in accordance with law no. 2013-537 of July 10, 2013 on the organization of the National Statistical System.

TO READ AT THE SURVEY

Hello Miss, Sir,
My name is _____, We came on behalf of the Ministry of Health to check the quality of the work done in the field during the vitamin A distribution campaign and the deworming of children under 5 years old.

GENERAL INFORMATION

QUESTIONS ANSWERS		CODES
Stratum		|_____|
Health region		|_____|
Health district		|_____|
locality		|_____|
Area (U= urban R= rural)		|_____|

QUESTIONS	RESPONSES	CODES
ZD number or Cluster		
Household number (1 to n)		
Investigator code		
team code		
Survey date	/_____/_____/_____ / (day month Year)	

Q: QUALITY CONTROL

Household identification number:

I1	How many children 6-59 months live in your household?	Number of children: _____ (enter the number)	|_____|

If several children in the household, collect information on only child

Q8: VITAMIN A SUPPLEMENTATION

No. QUESTIONS		ANSWERS	CODED
Child code/rank (1 to n) from smallest to largest			|_____|
Q8.1	What is the sex of the child?	1=Male 2=Female	|_____|
Q8.2	What is the child's date of birth?	The date must be between November 02, 2013 to May 02, 2018	|_____|_____|_____|
Q8.3	What is the source of this information?	1=Health record 2=Birth certificate 3=Calendar of events 99=Other to specify	|_____|
Q8.4	Relationship to the child		

No.	QUESTIONS	ANSWERS	CODED
Q8.5	During the campaign from January 7 to 14, 2022, which has just ended, did the child receive vitamin A? **(show vitamin A capsules or photo)**	Vitamin A 1=Yes 0=No 3=Don't know	|____|
Q85b	If so where did he get it?	Venue 1=Here at home 2=Health Center 3=Street/market 4=School/Church/Mosque 5=Don't know 99=Other, specify	|____|
Q8.6	If not, why did the child not receive this product during this campaign?	1= the child was absent 2= agents did not pass 3= agents are no longer ironed 4= not informed 5=the child was sick 6=refusal, 7=lack of products 8 = There was no campaign in our region 9= The trip was too long 10= The trip was too expensive 11= Too much work at home 12= There was no one to bring the child 13= No time to bring the child 14= The family decision maker refused to allow the child to receive it 15 = don't know/can't remember 99=Other, specify	|____|

11.2.1. List of villages having had geographical coverage problems

These are the villages that mentioned as the main reason, the health workers did not come.

Prefecture	Sub-prefecture	**Town**
Conakry	Conakry	Dabompa
Conakry	Conakry	Dapompa tray
Conakry	Conakry	Enta Market
Conakry	Conakry	Lansanaya
Conakry	Conakry	Matoto Center
Conakry	Conakry	Taouyah
Dubreka	dubreka_centre	baillobaya
Gueckedou	Gueckedou center	Gnalenko
Gueckedou	Gueckedou center	Toladou
Gueckedou	Gueckedou center	Toumadou
kankan	kankan_center	Farako 2
kankan	kankan_center	Timbo
Kindia	Friguiagbe	Friguiaghé 2 gnoungouya
Kindia	Mambiya	Yembeta
Macenta	macenta_centre	Boiga
Macenta	macenta_centre	Gbagbalame
Macenta	watanka	SOGOLON / GBELEZIA
Macenta	watanka	SOGOLON/BOLLOGOLAOU
Macenta	watanka	SOGOLON/GOSOBOU
mali	Touba	bandani
Nzerekore	nzerekore_centre	Koleyeba
Nzerekore	nzerekore_centre	Mohomou
Nzerekore	nzerekore_centre	Wessoua
Siguiri	kintinian	Balato
Siguiri	siguiri_center	Siguiri koura 2
Telimele	kollet	Konkoure