ESMPIN

EXPANDED SOCIAL MARKETING PROJECT IN NIGERIA

Baseline survey data on family planning, diarrhea, malaria and nutrition in fifteen Nigerian States

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This report was made possible by support from the U.S. Agency for International Development (USAID) under terms of Cooperative Agreement 620-A-00-10-00016-00.

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ACRONYMS

ANC	Ante-natal care
CH	Child Health
CYP	Couple Years of Protection
CPR	Contraceptive Prevalence Rate
EBF	Exclusive Breastfeeding
ESMPIN	Expanded Social Marketing Project in Nigeria
ETA	Enumeration Team Areas
FP	Family Planning
GIS	Geographic Information System
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IPT	Intermittent Preventive Treatment of malaria
IR	Intermediate Result
ITNs	Insecticide Treated Nets
LLIN	Long-lasting Insecticide Treated Net
LQAS	Lot Quality Assurance Sampling
MAP	Measuring Access and Performance
MDGs	Millennium Development Goals
MMCPR	Modern Method Contraceptive Prevalence Rate
MNCH	Maternal Neonatal and Child Health
NARHS	National HIV/AIDS and Reproductive Health Survey
NMIS	National Malaria Indicator Survey
NMCP	National Malaria Control Program
NPC	National Population Commission
OCs	Oral Contraceptives
ORS	Oral Rehydration Salt
ORT	Oral Rehydration Therapy
PERForM	Performance Framework for Social Marketing and Communications
POU	Point of Use
PPS	Probability Proportionate to Size
PSI	Population Services International
RDT	Rapid Diagnostic Test
RH	Reproductive Health
SDPs	Service Delivery Points
SPARCS	State-specific HIV/AIDS, Reproductive Health and Child Health Survey
SPSS	Statistical Package for the Social Sciences
STIs	Sexually Transmitted Infections
SWS	Safe Water Systems
USAID	United States Agency for International Aid
USG	United States Government

Recommended Citation
Expanded Social Marketing Project in Nigeria.
2011 Baseline Report. Abuja, Nigeria.

ISBN: 978-978-50936-7-4

EXECUTIVE SUMMARY

Diarrhea, malaria, lack of family planning (FP) and improper care of pregnant mothers and newborns are some of the causes behind Nigeria's high maternal, neonatal and child mortality rates. The Expanded Social Marketing Project in Nigeria (ESMPIN) aims to focus on these concerns in order to ensure healthier practices and healthier communities in Nigeria.

This report presents baseline information and indicators for the ESMPIN project in all 15 project states: Akwa Ibom, Bauchi, Delta, Edo, Jigawa, Kaduna, Kano, Katsina, Kebbi, Lagos, Ogun, Oyo, Rivers, Sokoto and Zamfara.

Overview of ESMPIN

ESMPIN is a USAID-funded project aimed at improving the health of women and children in Nigeria by increasing the use of modern family planning methods and child health products. ESMPIN plans to achieve this objective through the following key activity areas: family planning and reproductive health (FP/RH) methods and products; malaria prevention and treatment; maternal, neonatal and child health (MNCH) methods and products (including nutrition); and diarrhea prevention and treatment.

ESMPIN will achieve its goal by using the evidence-based social marketing approach called the Performance Framework for Social Marketing and Communications (PERForM), a framework pioneered by ESMPIN's sub-partner, Population Services International (PSI). PERForM was developed to allow research to inform social marketing programs, as well as track exposure to programs and monitor changes in desired behaviors over time.

Description of Baseline Data Sources and Purpose

Baseline data to inform ESMPIN's activities were collected using State-specific HIV/AIDS, RH and Child Health Surveys (SPARCS), a Measuring Access and Performance (MAP) survey and the National Malaria Indicator Survey (NMIS).

State-specific HIV/AIDS, RH and Child Health Survey (SPARCS)

In 2011, SPARCS examined a nationally representative sample of 6,268 females ages 15-49 and 6,233 males ages 15-64 living in households in rural and urban areas in 18 states[1] across Nigeria. The specific purpose of SPARCS was to collect quantitative data on key sexual and reproductive health indicators among the sampled groups in order to:

- Monitor trends and changes in behaviors that influence RH and HIV/AIDS in the study states;

[1] The SPARCs states were: Kano, Jigawa, Katsina, Kaduna, Rivers, Delta, Edo, Akwa Ibom, Oyo, Ogun, Lagos, Zamfara, Kebbi, Sokoto, Bauchi

- Identify information gaps which may be further explored using qualitative surveys;
- Review and reprogram FP/RH/Malaria social marketing and reproductive health interventions in the country based on the data;
- Provide information that would guide the development of appropriate intervention communication strategies; and
- Obtain data from respondents on breastfeeding, antenatal and postnatal care; condom knowledge- access and use; sexual history- STIs and treatment seeking behaviors; knowledge, opinions and attitudes about HIV/AIDS stigma and discrimination; and family planning and communications.

The SPARCS sample was drawn from the updated master sampling frame of rural and urban localities developed and maintained by the National Population Commission (NPC). The survey was executed within the framework of the population, study area and sample design. Probability sampling[2] was used for the survey. Stage one involved the selection of 30 Enumeration Team Areas (ETA)[3] with probability proportionate to size. Stage two entailed the selection of eligible individuals listed within the cluster with equal probability of selection and any eligible persons being included in the final sample.

Measuring Access and Performance (MAP)

The Measuring Access and Performance (MAP) survey provides evidence for social marketing decision making by allowing programmers to assess product availability and accessibility using pre-defined criteria for coverage, quality of coverage, and access.

A MAP survey was conducted in August 2011 to define and measure coverage and quality of coverage indicators. The survey used existing Geographic Information System (GIS) population layers and specially created maps of the areas of interest, which were produced based on publicly available maps, the population census, and the Lot Quality Assurance Sampling (LQAS) method. The products surveyed included:

- Contraceptive pills (Duofem, Postinor 2, Pregnon, Locon-F)
- Injectables (Noristerat, Norigynon and Depo-Provera)
- Condoms (Gold Circle, Lifestyle, and female condoms)
- Permanet LLIN
- Household water treatment products (Water Guard and PUR)

[2]Probability sampling procedure is a two-stage cluster sampling aimed at selecting eligible persons with known probability.

[3] ETA is an Enumeration Area or combination of Enumeration Areas which served as cluster unit during the 2006 National Census.

This information enables the sales and marketing teams to prioritize their efforts in vital health areas. Externally, results can be used as a resource for fundraising and informing key stakeholders of intervention performance outcomes.

A total of 19 states were selected for the MAP survey, and 38 urban and rural localities were visited in each state, covering a total of 722 localities. These localities were selected based on probability proportionate to size (PPS) after the ordering of geographical locations. The list of localities in Nigeria was provided by the National Population Commission (NPC). Simple audit sheets were used to collect information on coverage and quality of coverage from outlets in the selected localities. The audit sheets were developed based on the information needed for calculating coverage and quality of coverage indicators. During analysis conducted with SPSS statistical software, variables for coverage and quality of coverage were constructed. The interpretation of results was based on the Lot Quality Assurance Sampling (LQAS) decision rule.

Nigeria Malaria Indictor Survey (NMIS)

The Nigeria Malaria Indictor Survey (NMIS) was conducted in 2010 by the National Population Commission and the National Malaria Control Program (NMCP) with support from other *Roll Back Malaria* partners. A nationally representative sample of more than 6,000 households was used. All women aged 14 to 49 in the households were eligible for individual interviews. During the interview, questions were asked about malaria prevention during pregnancy and treatment of childhood fever. Children aged 6 to 59 months who lived in the households were tested for anemia and malaria using finger-prick blood samples. The primary objective of the 2010 NMIS project was to provide information on malaria indicators and malaria prevalence, both at the National level and in each of the country's 6 geopolitical zones.

GENERAL DESCRIPTION OF HEALTH AREAS AND OVERALL SUMMARY RESULTS

This section presents the overall results of the SPARCs survey using the averages from all 15 ESMPIN priority states, as well as a general discussion of the different health areas and indicators measured. The data provides the overall baseline for ESMPIN, and will be used for comparison at the end of the project. Following this section, baseline data for individual states is presented.

FAMILY PLANNING AND REPRODUCTIVE HEALTH

Family planning refers to a conscious effort by an individual or couple to limit or space the number of children they have through the use of contraceptive methods. The contraceptive prevalence rate (CPR) is frequently used to measure access to family planning services. According to the World Bank, the contraceptive prevalence rate is the percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women ages 15-49. For Nigeria, the 2008 NDHS reported a contraceptive prevalence rate of 9.7% (Nigeria DHS, 2008).

Reproductive health addresses the reproductive system, processes and functions at all stages of life. Health, according to the World Health Organization, is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity. Therefore, reproductive health means that people can lead a responsible, satisfying and safe sex life while being able to reproduce and having the freedom to decide if, when and how often to have children. Maternal mortality is the single most important health issue facing obstetricians, gynaecologists and Nigerians. With access to comprehensive reproductive health services including pregnancy care, safe delivery care and treatment and prevention of sexually transmitted infections, women are less likely to die in pregnancy, more likely to have healthier children, and better able to balance their family and work life (Advocacy Nigeria, 2006).

Essential interventions in ante-natal care (ANC) include identification and management of obstetric complications such as pre-eclampsia, tetanus toxoid immunization, intermittent preventive treatment for malaria during pregnancy (IPT), and identification and management of Infections including HIV, syphilis and other sexually transmitted infections (STIs).

A recent multi-country randomized control trial led by the WHO and a systematic review showed that essential interventions can be provided over four ANC visits at specified intervals, at least for healthy women with no underlying medical problems. The result of this review has prompted WHO to define a new model of ANC based on 4 goal-oriented visits called *focused antenatal care*.

Summary of Results

Table 1 below presents the key indicators from SPARCS as an average of all 15 states. The overall CPR for men is 11.6% and for women 9.7%, though the proportion of both men and women who can recall at least 3 modern family planning methods is much higher at 25.0% and 70.6% respectively. The 2 indicators that measure opposition to use of a modern contraceptive method are relatively low: 15.1% of respondents mention opposition to use by self, partner or religious prohibitions, and only 4.6% of respondents mention method-related reasons as to why they do not use a modern FP method.

Table 1: SPARCS Key Indicators for Family Planning and Reproductive Health

INDICATOR	**15-State Average (%) N=12501**
Modern methods contraceptive prevalence rate (MMCPR)	M=11.6 (n=368) F=9.7 (n=398)
Proportion of births receiving at least 4 ante-natal care (ANC) visits during pregnancy	44.0 (n=1865)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.60 (n=5472)

MALARIA PREVENTION AND TREATMENT

Nigeria bears up to 25% of the malarial diseases burden in Africa, hence contributing significantly to the one million lives lost per year in the region, which mostly consist of children and pregnant women. Malaria is endemic in Nigeria and constitutes a major public health problem despite the preventable nature of the disease. Malaria-related deaths account for up to 11% of maternal mortality, up to 25% of infant mortality and up to 30% of children under-5 mortality, resulting in approximately 300,000 childhood deaths annually. The geographic location of Nigeria makes the climate suitable for malaria transmission throughout the country. It is estimated that up to 97% of the country's more than 150 million people risk acquiring the disease. The remaining 3% of the population, who live in the mountains in southern Jos at an altitude ranging from 1,200 to 1,400 meters, are at relatively low risk for malaria. The use of mosquito nets by

vulnerable groups in highly endemic communities is one of the major malaria control and prevention strategies proposed by the Abuja Declaration and the Plan of Action (RBM, 2000).

According to the NDHS 2008 report, 12% of children under the age of five slept under a mosquito net on the night before the survey. The same proportion slept under an ever-treated net; however, only 6% of the children slept under an insecticide-treated net (ITN). It is interesting to note that only half of the children in households that own an ITN slept under an ITN on the night before the survey (Nigeria DHS, 2008).

Summary of Results

Table 2 below presents the key malaria prevention and treatment indicators from SPARCS, as an average of all 15 states. Overall, 55.4% of children under 5 had slept under an ITN the night before the survey, while 95.3% of respondents knew that malaria can be prevented through the use of ITNs. This indicates that it is not knowledge, but rather access, or some other barrier that is preventing a higher rate of use.

Table 2: SPARCS Key Indicators for Malaria Prevention and Treatment – 15-State Average

INDICATOR	**15-State Average (%) N=12501**
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)

DIARRHEA AND SAFE WATER SYSTEMS

Lack of safe water has become a constant challenge for more than one billion people globally. Every year, approximately 3 million children under 5 die from diarrheal illnesses and other water related diseases (CDC, 2003). Exposure to diarrhea-causing agents is frequently related to the use of contaminated water and to unhygienic practices in food preparation and disposal of excreta. A simple and effective response to diarrhea prevention is hand-washing with soap.

Increasing access to safe drinking water in Nigeria is a key Millennium Development Goal, as only 56% of households, or 63 million people, have access to improved sources of water of which 75% are in urban areas and 45% are in rural areas (Nigeria DHS, 2008). Only one in five rural households has clean water at the home, and most families must collect water from unimproved and unsafe sources, such as rivers or streams. Only

10% of Nigerian households use an appropriate method of water treatment (Nigeria DHS, 2008).

Summary of Results

Table 3 below presents the key indicators for diarrhea prevention and treatment and safe water systems as an average of all 15 states. Although 30.8% of caregivers know that oral rehydration salts (ORS) and Zinc are an effective means of treating diarrhea among children under 5, only 12.9% of children under 5 with diarrhea were treated with oral rehydration therapy (ORT). The proportion of respondents who have heard of point of use (POU) water products for disinfecting drinking water is notably low at 3.3%, while 60.1% of caregivers know that hand-washing with soap is an effective means of preventing diarrhea in children under 5.

Table 3: SPARCS Key Indicators for Diarrhea and Safe Water Systems – 15 States Average

INDICATOR	**15 State Average (%) N=12501**
Proportion of children under 5 years old with diarrhea treated with oral rehydration therapy (ORT)	12.9 (n=913)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children less than 5 years	30.8 (n=12501)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under than 5 years	20.1 (n=12501)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5 years	60.1 (n=12501)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)

NUTRITION

The importance of breastfeeding as a determinant of infant nutrition, child mortality and morbidity has long been recognized and documented in public health literature. UNICEF and WHO recommend that children be exclusively breastfed (no other foods or liquids) during the first 6 months of life and that children be given solid or semi-solid complementary foods in addition to continued breastfeeding from age 6 months to 24 months (or more) when the child is fully weaned. Evidence suggests that exclusive breastfeeding of infants for 6 months has several advantages over exclusive breastfeeding for 3-4 months followed by mixed breastfeeding (Awogbenga, 2009).

Exclusive breastfeeding is recommended because breast milk is uncontaminated and contains all of the nutrients necessary for children in the first few months of life.

A study conducted by Agho et al., showed that the proportion of exclusively breastfed infants was 20% at birth, 19% at 2 months, 13% at 4 months and further declined to about 4% at 5 months (Agho, 2011). Although breastfeeding is widely practiced across all subgroups of women, the timing of initial breastfeeding varies by background characteristics. In Nigeria, the NDHS 2008 results show that the proportion of children breastfed within one hour of delivery is slightly higher in urban areas at 41%, than in rural areas, where it is 38% (NDHS, 2008).

Summary of Results

Table 4 below shows that only 20.4% of respondents practiced exclusive breastfeeding of children less than 6 months of age.

Table 4: SPARCS Key Indicator for Nutrition – 15-State Summary

INDICATOR	**15-State Average (%) N=12501**
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)

MAP SUMMARY RESULTS

Table 5 below shows the 15-State MAP indicators for each health area: family planning and reproductive health, malaria prevention and treatment, and diarrhea and safe water systems.

Table 5: MAP Indicators – 15-State Summary

INDICATOR	**15-State Average (%) N=722**
Family planning and reproductive health	
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7

Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2
Malaria prevention and treatment	
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial drugs	Urban=55.4 Rural=24.4
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4
Diarrhea and safe water systems	
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8

Table 5 above indicates that coverage of communities is generally higher in urban, than rural areas in the fifteen states, for almost all of the indicators and products assessed.

RESULTS BY STATE: AKWA IBOM

SPARCS RESULTS
FAMILY PLANNING AND REPRODUCTIVE HEALTH

Although the CPR rate in the state of Akwa Ibom State is 32.7%, and about 40% of adults have heard of at least one contraceptive method, indices from the SPARCS survey show that usage of FP products is low. According to the survey, the proportion of all women and men who report that they are currently using a modern method of contraception in Akwa Ibom State is 16.7% (n=16) of women and 9.6% (n=11) of men. The average across the fifteen states where the survey was conducted is 9.7% (n=398) of women and 11.6% (n=368) of men.

In the 15 ESMPIN states, an average of 70.6% of females and 25.0% of males could mention at least 3 family planning methods, while only 24.6% of females and 15.5% of males in the state of Akwa Ibom could.

Although discussing contraceptives between husband and wife is not a prerequisite for contraceptive use, its absence may pose a barrier. The lack of discussion may reflect a lack of personal interest, hostility to the subject, or shyness in talking about sex-related issues (Indonesia NDHS, 2002/2003). The survey revealed that 28% of males and 29.8% of females in Akwa Ibom State had taken part in a discussion on family planning with their spouse. The average for the 15 states was 17.8% and 20.9% of males and females respectively.

The SPARCS survey showed that 4.6% of respondents from the 15 states and 3.5% in Akwa Ibom State did not use family planning as a result of opposition to use by the respondents themselves, their partners or their religion. In addition, 4.6% of respondents from the 15 states and 6.2% of those from Akwa Ibom State mentioned method-related reasons why they do not use family planning methods.

Data from the survey shows that 45.2% women in Akwa Ibom State received at least 4 ante-natal care (ANC) visits, close to the 15-State Average of 44.0%.

Table 6 shows the key indicators for Akwa Ibom State compared to the 15 States Average.

Table 6: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Akwa Ibom State

INDICATOR	15-State Average (%) N=12501	Akwa Ibom State (%) N=614
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F=9.7 (n=398)	M= 9.6 (n=11) F= 16.7 (n=16)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	45.2 (n= 62)
Proportion of respondents who can recall at least 3 modern family planning products	F=70. 6(n=4399) M=25.0 (n=1566)	F=24.6 (n=78) M=15.5 (n=46)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	F=28 (n=314) M=29.8 (n=292)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	13.9 (n=317)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.60 (n=5472)	3.5 (n=257)

MALARIA PREVENTION AND TREATMENT

Despite the community's high level of knowledge about insecticide treated nets as a means to prevent malaria (93.7%), the survey revealed that the percentage of households with at least one long-lasting insecticide-treated net (LLIN) is 13.7%, and the number of children under 5 who sleep under an ITN is 33.6%. The percentage of pregnant women who received Intermittent Preventive Treatment of malaria (IPT) during antenatal care is 12.6%.

Data from SPARCS reported that overall 33.6% of pregnant women slept under ITN, and 11.4% of children under 5 had slept under ITN in the Akwa Ibom State the night before the survey.

Knowledge about ITNs is high among caregivers of children under 5 in all the ESMPIN states; 95.3% (n=6297) of respondents in the 15 states and 93.3% (318) of those in Akwa Ibom State know that malaria can be prevented through the use of insecticide treated nets. Although there is a slight difference in the knowledge between respondents in the 15 states and Akwa Ibom State, these figures point to the need to employ strategies that will sustain the knowledge and educate community members on the need to use mosquito nets to prevent malaria.

Table 7: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Akwa Ibom State

INDICATOR	15-State Average (%) N=12501	Akwa Ibom State (%) N=614
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	33.6 (n=220)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	93.7 (n=318)

DIARRHEA AND SAFE WATER SYSTEM

Diarrheal prevalence in children under 5 within 2 weeks preceding survey is 4.1%, and the percentage of women with knowledge of ORS as a means to manage diarrheal diseases is 45.5%.

Data from the SPARC survey show that 1.7% and 20.1% of the households in the 15 ESMPIN states and in Akwa Ibom State respectively use a POU water treatment to disinfect drinking water. Moreover, the survey also reported that 20.1% of respondents in the 15 states and 31.3% in Akwa Ibom State know that use of POU water systems are effective means of preventing diarrhea among children under than 5 years**.**

On the knowledge of ORS and zinc, the survey showed that 30.8% of respondents in the 15 states and 22% in Akwa Ibom State know that ORS and zinc are effective means of treating diarrhea among children under 5 while the survey also showed that 60.1% of respondents in the 15 states and 81.1% in Akwa Ibom State were aware that washing of hands with soap is an effective means of preventing diarrhea among children under 5**.**

Data from the survey also showed that no respondents from Akwa Ibom had treated a child under 5 with ORT while in the 15 ESMPIN states, 12.9% of the respondents had treated children under 5 with ORT.

Knowledge of the POU water products was also low as 3.3% of respondents from the 15 ESMPIN states and 2.4% in Akwa Ibom State had heard of POU as a water product for the disinfection of drinking water.

Table 8: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Akwa Ibom State

INDICATOR	15-State Average (%) N=12501	Akwa Ibom State (%) N=614
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	0 (n=19)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	22 (n=614)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	31.3 (n=614)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	81.1(n=614)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	2.1 (n=19)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	2.4 (n=614)

NUTRITION

Data from the survey shows that 20.4% in the 15 states and 9.1% in Akwa Ibom State had exclusively breastfed children less than 6 months of age.

Table 9: Summary of SPARCS Nutrition Key Indicator Comparing 15-State Average and Akwa Ibom State

INDICATOR	15-State Average (%) N=12501	Akwa Ibom State (%) N=614
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	9.1 (n=22)

MAP RESULTS

MAP results are described and presented in tabular form as follows:

Coverage of Family Planning Products

Response from the survey shows that oral contraceptives (OCs) coverage in Akwa Ibom State is 95% in the urban areas and 75% in the rural areas. Figures from this survey show a high coverage (availability) of OCs but underscore the need to introduce strategies that will sustain this coverage.

Research has shown that the Standard Days Method is more than 95% effective with correct use (condoms or abstinence during days 8–19 of the menstrual cycle), and more than 88% effective in typical use, similar to a number of other user-directed methods (*Product brief Caucus on New and Underused Reproductive Health Technologies*).

The coverage standard for Cycle Beads deduced from the survey is 14% each in both the urban and rural communities in Akwa Ibom State. These figures are relatively low and point to the need for intervention to be directed towards these areas in order to scale up coverage and lead to increased CYP.

Coverage for Gold Circle condom is 95% in both urban and rural communities in Akwa Ibom State, while that of Lifestyle is 20% in urban and 14% in the rural communities of Akwa Ibom State. Gold Circle condom has been in the social market for a relatively long time, compared to Lifestyle.

Twenty-two percent of facilities, according to the MAP data for Akwa Ibom State experienced stock-outs of specific contraceptive tracer drugs offered by the SDPs while that for the 15 states was 36%. These figures highlight the need for improvement in stocking procedures of SDPs in urban and rural areas in order to reduce the incidence of stock outs and ensure product availability.

Coverage of Malaria Prevention and Treatment Products

ITNs are distributed by the government and partners through stand-alone campaigns and through integration into other interventions such as those for measles vaccinations. Nigeria implements a nationwide, routine LLIN distribution system through health facilities that are modelled on the modified ITN Massive Promotion and Awareness Campaign (IMPAC) system. The predetermined coverage is estimated at a 10-minute walk in urban areas and 30-minute walk in rural areas.

Only 20% of both urban and rural communities attain the pre-determined coverage standard for Permanet ITNs. These low coverage standards demonstrate the need for more intervention strategies, along with a scale up in the project states.

The survey also collected information on coverage area for anti-malarial drugs. The most commonly used drug distributed by SFH is Coartem (ACT1, ACT2, ACT3, and ACT4). Using the predetermined coverage for urban and rural areas, the survey shows that coverage for first line of anti-malaria is 95% in urban areas and 90% in rural areas of Akwa Ibom State. Figures for coverage in urban and rural communities are impressively high and underscore the need to introduce interventions that will sustain coverage in the state.

Coverage of Child Health Products

Data show that the coverage of Water Guard in Akwa Ibom State is 65% in the urban communities and 35% in the rural communities, while that for PUR is 20% in the urban areas and 25 % in the rural areas of the same state. These figures are remarkably low showing a very low coverage of POU products, thus underscoring the need for intervention strategies directed towards these areas.

Table 10: Summary of MAP Indicators for Akwa Ibom compared to 15 State Average

INDICATOR	**15 State Average (%) N=722**	**Akwa Ibom State (%) N=38**
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	22 (n= 183)
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=75
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=95 Lifestyle Urban= 20 Rural=0
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban = 20 Rural = 20
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial.	Urban=55.4 Rural=24.4	Urban = 50 Rural = 25
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban =30 Rural = 20

INDICATOR	15 State Average (%) N=722	Akwa Ibom State (%) N=38
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban= 65 Rural=35 PUR Urban= 20 Rural= 25

*Thirty eight (38) localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.

RESULTS BY STATE: BAUCHI

SPARCS RESULTS
FAMILY PLANNING AND REPRODUCTIVE HEALTH

The proportion of women who reported that they were currently using a modern method of contraception was 9.7% across the 15 ESMPIN priority states and 4.6% in Bauchi State. From the survey, more men use a modern method of contraception in the 15 states (11.6%) than women. In Bauchi State, 28.3% of males and 19.5% of the female respondents could recall at least 3 modern family planning methods. In contrast, the majority of the respondents in the 15 ESMPIN states (70.6%) could remember at least 3 methods.

About 2.0% of the respondents in Bauchi State and 4.6% in the 15 ESMPIN states mentioned a method-related reason as to why they do not use a modern family planning method. However, the proportion of all respondents who reported opposition to use by self, partner or religion in Bauchi State was 28%.

Some studies have shown that spousal communication is an important precursor to the adoption of family planning methods. Seven percent of women who have never discussed family planning with their husband use a method of contraception compared to 27% of women who discuss family planning once or twice, and 40% of women who discuss family planning more often (Antenane Korra, 2002). The survey showed that 29% of males and 25.5% of females discussed family planning issues in Bauchi State.

Among the clients interviewed, 58.3% attended antenatal care at least 4 times during their last pregnancy in Bauchi State compared to 44 % across the 15 ESMPIN priority states.

Table 11: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Bauchi State

INDICATOR	15-State Average (%) N=12501	Bauchi State (%) N=858
Modern methods contraceptive prevalence rate	M=11.6 (n=368) F=9.7 (n=398)	M=4.6 (n=12) F=2.8 (n=10)
Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	58.3 (n=192)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (n=566)	F=19.5 (n=82) M=28.3 (n=121)

INDICATOR	15-State Average (%) N=12501	Bauchi State (%) N=858
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=29 (n=465) F=25.5 (n=423)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	28.0 (n=421)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	2.0 (n=405)

MALARIA PREVENTION AND TREATMENT

More than three quarters of the respondents in Bauchi State (75.5%) revealed that their children under 5 had slept under an ITN the previous night. According to 2008 DHS data, the proportion of children who slept under ITNs was 49.7% in Bauchi State (Nigeria DHS, 2008). This shows that there has been a remarkable increase in the use of ITNs.

An ITN is a mosquito net that repels; disables and/or kills mosquitoes that come into contact with insecticide on the netting material. Approximately all respondents in Bauchi State (97.9%) and in the 15 ESMPIN priority states (95.3%) know that ITNs can be used to prevent malaria.

Table 12: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Bauchi State

INDICATOR	15-State Average (%) N=12501	Bauchi State (%) N=858
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	75.5 (n=355)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	97.9 (n=419)

DIARRHEA AND SAFE WATER SYSTEM

When asked about ORS packets and Zinc, only 30.9% of respondents in the 15 states and 45% of respondents in Bauchi State identified ORS as an effective means of treating diarrhea among children under 5.

About 20.1% and 27.9% of the respondents in the 15 ESMPIN states and Bauchi State know that the proper storage of water and the use of POU systems are effective means of preventing diarrhea among children under 5.

In addition, 60.1% of caregivers in the 15 states and 67.5% of caregivers in Bauchi State know that proper hand washing with soap is an effective means of preventing diarrhea among children under 5.

The proportion of respondents who have heard about POU water products was very low, 3.3% for the 15 states and 3.4% in Bauchi, highlighting the need to increase awareness and availability of water treatment products throughout the 15 ESMPIN priority states.

Table 13: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Bauchi State

INDICATOR	15-State Average (%) N=12501	Bauchi State (%) N=858
Proportion of children under 5 with diarrhea treated with ORTs	12.9 (n=913)	14.6 (n=82)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	37.3 (n=849)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	27.9 (n=849)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	67.5 (n=849)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	1.8 (n=849)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	3.4 (n=849)

NUTRITION

Exclusive breast feeding (EBF) has important protective effects on the survival of infants and decreases the risk for many early-life diseases. About 20.4% and 29.5% of

women in the 15 ESMPIN priority states and Bauchi State breastfeed their children under 6 months.

Table 14: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Bauchi State

INDICATOR	15-State Average (%) N=12501	Bauchi State (%) N=858
Prevalence of exclusive breastfeeding of children under 6 months	20.4 (n=671)	29.5 (n=61)

MAP RESULTS

The MAP results, presented fully in Table 15 below, are described here:

Coverage of Family Planning Products

About 36% of SDPs in the 15 states and 36% of SDPs in Bauchi State have experienced a stock-out of specific contraceptive tracer drugs.

The target areas that reach a predetermined coverage standard (10-minute walk in urban areas and 30-minute walk in rural areas) for OCs were 95% in the urban areas and 70% in the rural areas of Bauchi State. Several studies in the 6 geopolitical zones in Nigeria indicate that contraceptive knowledge and awareness, especially among females ages 15 to 45, is very high. The main sources of contraceptives, in decreasing order of frequency, are patent medicine stores, pharmacy shops, friends/siblings/partners, and health facilities. Among the health facility sources, the availability of contraceptives is higher at private clinics than at government family planning and maternal health clinics or hospitals.

Using Cycle Beads is an easy way to plan or prevent pregnancy naturally. This natural family planning option enables a woman to track her cycle and know if she is on a day when pregnancy is likely or not. Cycle Beads is a natural family planning choice used by women around the world because it is: more than 95% effective, side effect free, easy to use, and inexpensive. It is a color-coded string of beads that represents the days of a woman's cycle and helps her use a natural family planning method called the Standard Days Method. This family planning method is designed for women with cycles between 26 and 32 days long.

As seen in the table below, the target areas that reach a predetermined coverage standard for Cycle Beads was equal to 14% in both urban and rural areas of Bauchi State.

With a predetermined coverage estimated at a 5-minute walk in urban areas and a 10-minute walk in rural areas, Gold Circle condom has a wider coverage of about 95% in the urban area and 70% coverage in rural areas of Bauchi State. Lifestyle condom has a low coverage standard of 30% and 14%. The reason for the wider coverage can be attributed to awareness created by health projects funded by USAID, DFID and/or the UN within the state. In addition to these efforts, ESMPIN will play a major role in extending social marketing of the products to the rural areas of Bauchi State.

Coverage for Malaria Products

With a predetermined coverage estimated at a 10-minute walk in urban areas and a 30-minute walk in rural areas, the percentage of target areas that reached a predetermined quality coverage standard for Permanet was 14% in the urban areas and 25% in the rural areas of Bauchi State.

The survey also collected information on coverage area for anti-malarial drugs. The most commonly used drug that is distributed by SFH is Coartem (ACT1, ACT2, ACT3, and ACT4).

The percentage of target areas that reached a predetermined quality coverage standard for anti-malarial drugs was 95% in the urban areas and 85% in the rural areas of Bauchi State.

Information on coverage area for malaria diagnosis was also collected in different locations of Bauchi State. According to the findings from the survey, the percentage of target areas that reached a predetermined quality coverage standard for malaria diagnosis was 55% in the urban areas and 50% in the rural areas of Bauchi State.

Coverage of Child Health Products

Proportion of target areas that reach predetermined coverage standard for Water guard was 55% in urban areas and 25% in rural area. The coverage area for PUR has an equal percentage in both urban and rural areas of 14%.

Table 15: Summary of MAP Indicators for Bauchi State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Bauchi State (%) N=38
Family planning and reproductive health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	36

Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=70
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=70 Lifestyle Urban=30 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=14 Rural=25
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial	Urban=55.4 Rural=24.4	Urban=95 Rural=85
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=55 Rural=50
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=55 Rural=25 PUR Urban=14 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: DELTA

SPARCS RESULTS
FAMILY PLANNING AND REPRODUCTIVE HEALTH

The proportion of respondents who could recall at least 3 modern family planning products is shown in the table below. Of the female respondents in the state, 40.4% could recall at least 3 modern methods of family planning, while only 27.9% of the males could recall at least 3 modern methods. The average for the 15 states was much higher for men (70.6%) and lower for women (25%).

The 2008 NDHS data showed that the overall contraceptive prevalence rate among all women in Nigeria is 15% (Nigeria DHS, 2008). The use of any family planning method increases with age from 7% among women ages 15-19 to 20% among women ages 35-39, and then declines to 10% for women ages 45-49. Most women currently using contraception use a modern method (11%), while 5% are using traditional methods.

The proportion of men and women who knew a method of contraception was 89.4% and 86.2% respectively while the proportion of men and women who knew a modern method of contraception was 86.8% and 83.2% respectively.

Among the females in the state, the modern methods contraceptive prevalence rate was 16.2%, and 26.3% among the male respondents. The average for the 15 ESMPIN states was 9.7% and 11.6% for males and females respectively.

The results suggest that although the knowledge of the respondents was high on awareness of contraceptive methods the uptake of family planning is still low.

The main reasons why many currently married women are not using a contraceptive method was reported in the 2008 NDHS. These reasons include fertility-related reasons, opposition to use, lack of knowledge and method-related reasons (Nigeria DHS, 2008). In the SPARCS survey conducted, 13% of the respondents mentioned opposition to use while 8.7% mentioned method-related reasons as their reasons for not using family planning.

The survey also displayed the proportion of the respondents who had discussed family planning at least once in the last 12 months with a spouse or a cohabiting partner. It showed that 32% of the females and 33.1% of the males in Delta State had discussed family planning while on the average, 20.9% of females and 17.8% of males discussed family planning in the 15 ESMPIN states.

UNICEF, the United Nations Population Fund (UNFPA) and the World Health Organization (WHO) recommend a minimum of 4 antenatal care visits during pregnancy, the minimum needed to provide the most important services, which can

include treatment of hypertension to prevent eclampsia, tetanus immunization, intermittent preventive treatment for malaria and distribution of insecticide-treated nets, prevention of mother-to-child transmission of HIV, micronutrient supplementation, and birth preparedness, including information about danger signs during pregnancy and childbirth. The frequency of ANC visits is still not within the acceptable WHO and UNICEF standards as only 33.6% of births received at least 4 ANC visits. On average, the 15 ESMPIN states showed 44.0% of births received at least 4 ANC visits. Unless the frequency of ANC visits is greatly increased maternal and child mortality will continue to be a topical issue.

Table 16: Summary of SPARCS Family Planning and Reproductive Health Key Indicators Comparing 15-State Average and Delta State

INDICATOR	15-State Average (%) N=12501	Delta State (%) N=893
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=26.3 (n=51) F=16.2 (n=37)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	33.6 (n=152)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=27.9 (n=118) F=40.4 (n=190)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=33.1 (n=384) F=32.0 (n=341)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	13.0 (n=470)
Proportion of respondents who mention method- related reasons why they do not use a modern FP method	4.60 (n=5472)	8.7 (n=378)

MALARIA PREVENTION AND TREATMENT

A number of studies have demonstrated that the use of ITNs is effective in reducing malaria-related morbidity and mortality. A 25% reduction in all causes of mortality for children 1 to 9 years of age was detected during the first year of the Gambian National Bed net Program. In Kilifi District, Kenya, a 33% reduction in mortality and a 44% reduction in hospital admissions for severe malaria were also found.

In Delta State, the proportion of children under 5 who slept under an ITN is 38.6%.

The majority (97.2%) of respondents in Delta State know that malaria can be prevented through the use of insecticide treated nets. The average for the 15 ESMPIN states was also very high at 95.3%.

ITNs should be provided to pregnant women as early in the pregnancy as possible, and their use should be encouraged for women throughout pregnancy and during the postpartum period. ITNs are also successful in reducing maternal anemia and placental infection (Garner et al., 2002).

Table 17: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Delta State

INDICATOR	15-State Average (%) N=12501	Delta State (%) N=893
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	38.6 (n=241)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	97.2 (n=472)

DIARRHEA AND SAFE WATER SYSTEM

Ninety-five percent of child deaths related to diarrhea can be prevented by a simple and inexpensive public health solution, oral rehydration therapy. ORT consists of a sugar and salt solution which is offered as a drink to children. Death from acute diarrhea is often caused by dehydration and malnutrition mainly due to loss of nutrients from the body during episodes of diarrhea. ORT is often achieved through the provision of oral rehydration salts, a powder from which mothers can easily make solution.

The WHO has defined zinc deficiency as one of the major risks to child health and recommended the use of zinc supplementation and the new formulation of ORSs as the best way to decrease the incidence, severity, duration and recurrence of diarrheal disease in children. Studies have shown that zinc supplementation provides a prophylactic protection against future bouts of diarrhea, and results in a 25% reduction in duration of acute diarrhea and 40% reduction in treatment failure or death in persistent diarrhea.

In Delta State, 5.6% of the children under 5 were treated with ORT in the state while in the 15 ESMPIN states, the proportion treated was 12.9%. This result shows that despite the large number of children suffering from diarrhea, very few are treated based on the WHO-stipulated guidelines.

In Delta State, 5.6% of the respondents were aware of the use of ORS and Zinc in treating diarrhea, while in the 15 ESMPIN states 25.5% were aware.

Twenty four percent of the respondents in the state knew that proper storage of water and the use of POU water systems are an effective means of preventing diarrhea among children under 5. Also, about 52.5% of the respondents know that hand washing with soap prevents diarrhea.

Very few of the respondents in Delta State (2.4%) had heard of a point of use water treatment product. It was also shown that very few of the households in Delta State (0.7%) use a POU water treatment, while in the 15 ESMPIN states; the average of households that disinfect their drinking water using a POU was 1.7%.

Table 18: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Delta State

INDICATOR	15-State Average (%) N=12501	Delta State (%) N=893
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	5.6 (n=36)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	25.5 (n=893)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	24.0 (n=893)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	52.5 (n=893)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	0.7 (n=893)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	2.4 (n=893)

NUTRITION

This survey showed that very few of the population exclusively breastfed their infants for the first 6 months.

Table 19: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Delta State

INDICATOR	15-State Average (%) N=12501	Delta State (%) N=893
Prevalence of exclusive breastfeeding of children under six months of age	20.4 (n=671)	9.4 (n=53)

MAP RESULTS

Coverage of Family Planning Products

The coverage of OCs in the urban areas of Delta State was 95% while coverage in the rural areas was 75%. This is an indication that the product was available in the state but more so in the urban areas.

The coverage of Cycle Beads was 20% in the urban areas and 14% in the rural areas. These very low coverage rates indicate the unavailability of the products at the time of the survey.

The coverage for Gold Circle and Lifestyle, which are male condoms marketed by SFH, is shown below. Gold Circle had a coverage rate of 95% in both the rural and urban areas of the state while Lifestyle had a low coverage of 30%. The difference in the coverage could be attributed to price as Lifestyle brand of male condom is more expensive than the Gold Circle.

Coverage of Malaria Prevention and Treatment Products

The coverage of Permanet in both the urban and rural areas of Delta State was very low (14% and 40% respectively). The finding of this study is also similar to that of the WHO (2010) which clearly shows that coverage of ITNs was still below the agreed targets.

The survey also showed that the coverage of Permanet in the urban and rural communities was 45% and 30% respectively, while the coverage for anti-malarias, shown below was 45% and 35% respectively in urban and rural areas of the state.

The coverage for malaria diagnostic kits was 30% in the rural areas and 60% in the urban areas of Delta State.

Coverage of Child Health Products

The two child health products socially marketed by SFH are PUR and Water Guard. The coverage for PUR was very low in both the urban and rural areas of the state (14% and 20% respectively). Coverage for Water Guard was also low in the rural areas (30%) and slightly above average in the urban areas (55%).

Table 20: Summary of MAP Indicators for Delta State compared to the 15-State Average

INDICATOR	15-State Average (%) N=722	Delta State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	31
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=75
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=95 Lifestyle Urban=30 Rural=30
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=45 Rural=30
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial.	Urban=55.4 Rural=24.4	Urban=35 Rural=45
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=60 Rural=30
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=55 Rural=30 PUR Urban=14 Rural=20

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: EDO

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

ESMPIN employs a comprehensive strategy to enable delaying, spacing and limiting births. It supports the national RH policy by directly contributing to the strategic focus of achieving desired and intended fertility. Thus the team will: increase the proportion of the target population with access to FP and child survival products by improving availability, affordability, knowledge, attitude and perception.

On average, respondents had about 90% knowledge of contraception and the various modern methods. This, therefore, is an indication that many individuals are aware of what contraception is and can mention at least one method of contraception.

CPR is one of the key indicators of the family planning program. The prevalence rate of modern contraceptive method in Edo State was 12.6% and 13.7% respectively in males and females in the state. These rates are still below the target and imply that few individuals in the state adopt modern methods of contraception. This survey also revealed that even though many individuals were aware of the various methods of contraception and modern methods of contraception, there remain significant reservations inhibiting the uptake of these services.

The main reasons why many currently married women are not using a contraceptive method was reported in the 2008 NDHS. These reasons include fertility-related reasons, opposition to use, lack of knowledge and method-related reasons. The SPARCS survey also investigated this and found that the proportion of respondents who mentioned opposition to use by self, partner or religion was 11.1% in Edo State and 15.1% across the 15 ESMPIN states, while 7% of the respondents in Edo State and 4.6% in the 15 ESMPIN states mentioned method-related reasons.

Among all the respondents, only 8% of the females and 6.2% of males had discussed family planning with the spouse or cohabiting partner in the state. More women in the 15 ESMPIN states (20.9%) discussed family planning in contrast to men (17.8%).

Table 21: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Edo State

INDICATOR	15-State Average (%) N=12501	Edo State (%) N= 858
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=12.6 (n=22) F=13.7 (n=22)

Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	44.8 (n=116)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=49.1(n=193) F=56.4 (n=198)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=6.2 (n=433) F=8.1 (n=419)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	11.1 (n=351)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.60 (n=5472)	7.0 (n=286)

MALARIA PREVENTION AND TREATMENT

The percentage of households that own any type of net increased from 12% in 2003 to 17% in 2008, while ownership of an ITN increased from 2% to 8% (NDHS, 2008). The proportion of children under 5 who slept under a mosquito net on the night before the survey doubled in the period between the two surveys from 6% to 12%. The proportion of children sleeping under ITNs increased from 1% to 6%.

The SPARCS survey shows the knowledge of the respondents on prevention of malaria using ITNs. The majority of the respondents (94.7%) in Edo State know that malaria can be prevented by the use of an ITN. In the 15 states, the percentage of respondents was also very high, indicating that the majority of the population of the ESMPIN states is aware of the prevention of malaria using ITNs.

In Edo state, 40.6% of children under 5 slept under an ITN the night before the survey. Despite the fact that the majority of the population is aware of the prevention of malaria by using ITNs, very few people actually make use of them.

Table 22: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Edo State

INDICATOR	**15-State Average (%) N=12501**	**Edo State (%) N=858**
Proportion of children under 5 years old who slept under an ITN the previous night	55.4 (n=4016)	40.6 (n=69)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	94. 7 (n=361)

DIARRHEA AND SAFE WATER SYSTEM

Two recent advances in managing diarrheal disease – newly formulated ORSs containing lower concentrations of glucose and salt and success in using zinc supplementation – can drastically reduce the number of child deaths. These new methods, used in addition to prevention and treatment of dehydration with appropriate fluids, breastfeeding, continued feeding and selective use of antibiotics will reduce the duration and severity of diarrheal episodes and lower their incidence.

Very few respondents in Edo state and the 15 ESMPIN states, 24% and 30.8% respectively, were aware of the effectiveness of ORS and Zinc in the treatment of diarrhea in children under 5. The survey also showed that very few children under 5 that had diarrhea had been treated with ORT in Edo State and the 15 ESMPIN states, 2.6% and 12.90% respectively. However, knowledge of hand washing as a means of prevention was quite high at 70.4%. Only 4.8% of the respondents had heard of POU water products. This may be either as a result of lack of awareness on POU water products and or the unavailability of these products

Table 23: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Edo State

INDICATOR	15-State Average (%) N=12501	Edo State (%) N= 858
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	2.6 (n=39)
proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	23.7 (n=744)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	27.4 (n=744)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5 5	60.1 (n=12501)	70.4 (n=744)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	1.2 (n=744)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	4.8 (n=744)

NUTRITION

The prevalence of exclusive breastfeeding was below average in Edo state as only 41% of the respondents' breastfed exclusively for the first 6 months. This result corroborates Agho et al., who reported that the proportion of exclusively breast fed infants was 20% at birth, 19% at 2 months, 13% at 4 months and further declined to about 4% at 5 months (Agho, 2011).

Table 24: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average Edo State

INDICATOR	15-State Average (%) N=12501	Edo State (%) N= 858
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	41 (n=22)

MAP RESULTS

Coverage of Family Planning Products

One-fifth, or 20%, of the USG assisted service delivery points within the state experienced stock-outs of specific contraceptive tracer drugs such as oral contraceptives and condoms. In the 15 ESMPIN states however, 36% of the service delivery points experienced stock-outs.

The coverage for OCs was 95% and 85% in the urban and rural areas of the state respectively. This, therefore, implies that OCs are easily available to the individuals in the various communities of Edo State.

The coverage for cycle beads was 25% and 14% in the urban and rural areas of the state respectively. This is an indication that the availability of this product is quite poor as few of the individuals in a community would be able to have access to them

The coverage for Gold Circle condoms is 95% in both urban and rural communities, but is lower for Lifestyle condoms, which has a coverage rate of 50% and 14% in urban and rural areas respectively.

Coverage of Malaria Prevention and Treatment Products

Since high coverage rates are needed to realize the full potential of LLINs like the Permanet, full coverage of all people at risk in areas targeted for malaria prevention through ITNs, including LLINs are recommended. Permanet, which is a long lasting insecticide treated net is distributed by SFH. This survey also assessed its coverage in Edo State.

The coverage of Permanet in both the urban and rural areas was very low at 14% and 40% respectively. The finding of this study is also similar to that of the WHO (2010)

which clearly shows that coverage of insecticide treated nets was still below the agreed targets.

The coverage of anti-malarial drugs in the rural areas was also low (45%). The coverage for the urban areas however, was 95% which is an indicator of good coverage. In order to increase the coverage in the rural areas, there should be an increase in the supply of anti-malarial drugs within the rural communities.

The coverage of rapid malaria diagnostic kits (RDTs) was also determined in the state. According to the findings from the survey, the target areas that reached a predetermined coverage for RDTs were 14% in the urban areas and 40% in the rural areas of Edo State. These proportions show that the kits were not available at the time of the survey.

Coverage of Child Health Products

The survey revealed that POU products like PUR had a very poor coverage of 20% and 14% in urban and rural areas of the state respectively. Availability of Water Guard was more widespread in the urban areas than in the rural areas with coverage of 95% and 50% respectively.

Table 25: Summary of MAP Indicators for Edo State compared to 15-State Average

INDICATOR	**15-State Average (%) N=722**	**Edo State (%) N=38**
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	20
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural= 85
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=25 Rural= 14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=95 Lifestyle Urban=50 Rural= 20

Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=40 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial	Urban= 55.4 Rural= 24.4	Urban=95 Rural=45
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=40 Rural=14
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=95 Rural=50 PUR Urban=20 Rural=14

RESULTS BY STATE: JIGAWA

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

More than 200 million women want to use safe and effective family planning methods but are unable to do so because they lack information, access to services, or the support of their husbands and communities. Due in part to this unmet need for family planning, an estimated 75 million women in developing countries have unintended pregnancies each year (Singh et al., 2009).

According to the Nigeria Demographic Health Survey, among pill users, the brands most commonly used are Confidence (38%) and Duofem (27%) (2008); the percentage of women using pills in the northern part of this country tends to be very low, because most prefer using traditional FP methods. The SPARCS survey showed that 12.2% of males and 4.7% of female respondents can remember at least 3 modern FP products in Jigawa State. On the other hand, more than half (70.6%) can remember at least 3 methods in the 15 states.

The proportion of all women who report that they are currently using a modern method of contraception was 9.7 % across the 15 ESMPIN priority states and 1.2% in Jigawa State. Around 1.4% of respondents in Jigawa State and 4.6% in the 15 states mention having a reason as to why they do not use a modern FP method. The reason may be due to various factors which include cultural beliefs, sexual norms, stigma and fear, long distances to health facilities and male dominance in decision making. The proportion of all respondents who reported that they are against modern FP methods in Jigawa State was 18% contrary to 15.1% in the 15 states. About 99.7% of the entire Jigawa State population are Muslims and accepting modern methods of FP proves challenging in most Islamic communities.

24.3% of males and 16% of females discussed FP-related issues in Jigawa State, a comparable figure to the 15 states percentages of 17.8 % for males and 20.9% for females.

Among those interviewed, 46.9% attended ANC visits at least 4 times during their last pregnancy in Jigawa State while the figure was slightly less, at 44%, across the 15 ESMPIN priority states showing higher awareness regarding maternal, neonatal, and child health (MNCH) in Jigawa State.

Table 26: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Jigawa State

INDICATOR	15-State Average (%) N=12501	Jigawa State (%) N=858
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F=9.7 (n=398)	M=2.0 (n=5) F=1.2 (n=4)
Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	46.9 (n=113)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=12.2 (n=53) F=4.7 (n=20)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 n=6178) F=20.9 (n=6146)	M=16.9 (n=414) F=24.3 (n=391)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	18.0 (n=422)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	1.4 (n=414)

MALARIA PREVENTION AND TREATMENT

More than half of the respondents in Jigawa state, 67.9%, revealed that their children under 5 had slept under an ITN the previous night. According to the NDHS 2008, the proportion of children who slept under an ITN was 51.4% in Jigawa State, potentially showing an increase in the use of ITNs over the last several years. Almost all respondents, 98.6%, in Jigawa State know that ITNs can be used prevent malaria.

Table 27: Summary of SPARCS Key Indicators for Family Malaria Prevention and Treatment Comparing 15-State Average and Jigawa State

INDICATOR	15-State Average (%) N=12501	Jigawa State (%) N=858
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	67.9 (n=386)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	95.0 (n=422)

DIARRHEA AND SAFE WATER SYSTEM

Caregivers were asked whether they knew about ORS packets and Zinc and less than one-third, 30.8 %, of respondents in the 15 states and 33% of respondents in Jigawa State knew that ORS is an effective means of treating diarrhea among children under 5. 20.1% and 3.5% of respondents in the 15 ESMPIN states and Jigawa State respectively know that proper storage of water and use of POU systems are an effective means of preventing diarrhea among children under 5. However, 73.5% of the respondents in Jigawa State compared to 60.1% in the 15 ESMPIN states were aware that proper hand washing with soap is an effective means of preventing diarrhea among children under 5. The proportion of respondents who have heard about POU water products was very low at 3.3% for the 15 states and even lower in Jigawa State at 0.7 %. This highlights the need to improve awareness and availability of water treatment products in the 15 ESMPIN priority states and in Jigawa State.

Table 28: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Jigawa State

INDICATOR	15-State Average (%) N=12501	Jigawa State (%) N= 858
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	14.6 (n=82)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	33.7 (n=858)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	3.5 (n=858)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	73.5 (n=858)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	0.6 (n=858)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	0.7 (n=858)

NUTRITION

It was found that 20.4% and 23.5% of women in the 15 ESMPIN priority states and Jigawa State respectively exclusively breastfeed their children under six months of age.

Table 29: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Jigawa State

INDICATOR	15-State Average (%) N=12501	Jigawa State (%) N=858
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	23.5 (n=51)

MAP RESULTS

Coverage of Family Planning Products

About 36% of SDPs in the 15 states and 63% in Jigawa State had experienced stock-outs of specific contraceptive tracer drugs.

Percentage of target areas that reach a predetermined coverage standard for OCs supported by ESMPIN the predetermined coverage is estimated to be a 10-minute walk in urban areas and 30-minute walk in rural areas. The percentage of target areas that reached a predetermined coverage standard for OCs was 75 % in the urban areas and 45% in the rural areas of Jigawa State.

The predetermined coverage for CycleBeads is estimated at a 10-minute walk in urban areas and 30-minute walk in rural areas. The percentage of target areas that reach a predetermined coverage standard for CycleBeads was 20% in urban and 14% rural areas of Jigawa State.

For condoms, the predetermined coverage is estimated at a 5-minute walk in urban areas and 10-minute walk in rural areas. Gold Circle condoms have a wider coverage of about 35% in the rural areas and 14% coverage in urban areas of Jigawa State. Lifestyle condoms have a low coverage standard of 20% and 15% in urban and rural areas respectively.

Coverage of Malaria Prevention and Treatment Products

The predetermined coverage is estimated at a 10-minute walk in urban areas and 30-minute walk in rural areas. The proportion of target areas that reach a predetermined quality coverage standard for Permanet was 25% in the urban areas and 14% in the rural areas of Jigawa State.

The survey also collected information on coverage area for anti-malarial drugs. The most commonly used drug distributed by SFH is Coartem (ACT1, ACT2, ACT3 and ACT4).

According to the findings from the survey, the proportion of target areas that reach a predetermined quality coverage standard for anti-malarial drugs was 95% in the urban

areas and 70% in the rural areas of Jigawa State. According to the findings from the survey, the proportion of target areas that reach a predetermined quality coverage standard for malaria diagnosis was 45% in the urban areas and 20% in the rural areas of Jigawa State.

Coverage of Child Health Products

Proportion of target areas that reach predetermined coverage standard for Water Guard was 30% in urban and 14% in the rural area. The coverage area for PUR has an equal percentage of 14% within the state.

Table 30: Summary of MAP Indicators for Jigawa State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Jigawa State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	63
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=75 Rural=45
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=20 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=14 Rural=35 Lifestyle Urban=20 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=25 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial	Urban=55.4 Rural= 2.4	Urban=65 Rural=20
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=45 Rural=20

INDICATOR	15-State Average (%) N=722	Jigawa State (%) N=38
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=30 Rural=14 PUR Urban=14 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: KADUNA

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

The SPARC survey showed that 38.9% of the female respondents and 27.4% of the male respondents in the state could mention at least 3 modern methods of contraception while the average in the 15 ESMPIN states was 70.6% and 25% for males and females respectively. Findings indicate that 14.2% of the males and 18.5% of the female respondents in the state were reported as currently using contraceptives while in the 15 ESMPIN states, 9.7% of females and 11.6% of males was reported. These figures are quite low and emphasize the need of interventions that will increase the MMCPR.

The NDHS 2008 reported various reasons that prevent individuals from taking up a family planning method. These reasons were grouped into two distinct groups which include method-related reasons and opposition to use by self, partner or religion.

3.4% of the respondents in the state and 4.6% in the 15 ESMPIN states mentioned method-related reasons, while 8.4% of the respondents in the state mentioned opposition to use by self, partner and religion as their reason for not using family planning.

Very few of the respondents discussed family planning with their spouse or cohabiting partner in the last 12 months in the 15 states (male 17.8%, female 20.9%) and Kaduna State (male 6.3%, female 33.1%).

The percentage of pregnant women who attended at least 4 ANC visits in Kaduna State is 48.2% which is slightly higher than the national average of 44%.

Table 31: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Kaduna State

INDICATOR	15-State Average (%) N=12501	Kaduna State (%) N=858
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=14.2(n=30) F= 18.5 (n=46)
Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	48.2 (n=139)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (n=1566)	F=38.9 (n=158) M=27.4 (n=118)

Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	F=33.1 (n=492) M=6.3 (n=398)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	8.4 (n=406)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	3.4 (n=322)

MALARIA PREVENTION AND TREATMENT

Malaria is one of the leading causes of death in developing countries (WHO, 2008). The 2010 NMIS collected data on measures to prevent malaria, including the use of mosquito nets among women and children and the prophylactic use of anti-malarial drugs. Malaria is the leading public health disease in Nigeria and accounts for many deaths especially among children under 5 and pregnant women. The malaria burden has hindered progress in the realization of the Millennium Development Goals. In order to reduce malaria related morbidity and mortality in Nigeria and minimize the socio-economic impact of the disease, the Federal Government of Nigeria is collaborating and partnering with donors such as the Global Fund, USAID and PMI Malaria in Nigeria to fight against malaria by buying into the National Strategic Plan 2009-2013 which provides for massive Scale Up of Interventions for Impact (SUFI).

The study showed that 55.4% and 63.1% of children under 5 in the 15 ESMPIN states and Kaduna State slept under an ITN the night before this survey. The majority of the respondents know that malaria can be prevented through the use of ITNs. This is seen from the very high proportions of respondents who reported having this knowledge.

Table 32: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Kaduna State

INDICATOR	15-State Average (%) N=12501	Kaduna State (%) N=858
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	63.1 (n=279)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	97.6 (n=423)

DIARRHEA AND SAFE WATER SYSTEM

Very few of the children under 5 were treated with ORT during a bout of diarrhea (12.9% on average and 18.9% in Kaduna State), even though the proportion of caregivers who know that ORS and Zinc are an effective means of treating diarrhea among children under 5 is 30.8% and 39.4% across the 15 states and within Kaduna State respectively.

It is seen that less than one-third of respondents in Kaduna State, only 29.8%, were aware that proper storage of water and use of POU water systems were an effective means of preventing diarrhea in children under 5. However, a larger proportion of caregivers (60.1% in the 15 states and 71.9% for Kaduna State) know that hand washing with soap is an effective means of preventing diarrhea in children under 5. Yet the awareness of POU water treatment is quite poor (3.3% and 5.7% for the 15 ESMPIN states and Kaduna State respectively).

Table 33: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Kaduna State

INDICATOR	15-State Average (%) N=12501	Kaduna State (%) N=858
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	18.9 (n=53)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	14.6 (n=82)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	29.8 (n=836)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	71.9 (n=836)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	3.5 (n=836)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	5.7 (n=836)

NUTRITION

This survey showed that very few of the children in Kaduna State and the 15 ESMPIN states, 11.5% and 20.4% respectively, were exclusively breastfed within the first 6 months.

Table 34: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Kaduna State

INDICATOR	15-State Average (%) N=12501	Kaduna State (%) N=858
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	11.5 (n=52)

MAP RESULTS

Coverage of Family Planning Products

A good coverage of products is essential for the success of any behavior change program. Incessant stock-outs can discourage individuals from adopting the behavior being promoted.

During the survey, stock-outs of family planning products were assessed. It was observed that 31% of the facilities in the state had experienced stock-outs of at least one contraceptive product like OCs or condoms. OC coverage in Kaduna State is 95% in the urban areas and 80 % in the rural areas. This result shows that the product is most likely affordable and accessible.

The MAP survey shows that coverage for Cycle Beads is 30% for urban areas and 14% for rural areas in Kaduna State. Figures reported from the MAP report are relatively low, hence the need to ensure availability of Cycle Beads and ensure adequate messages on its use.

The coverage of the Gold Circle brand of male condoms is quite high in both urban and rural areas at 95% and 80% respectively. However, coverage for Lifestyle condom is low in both the urban and the rural areas at 45% and 14% respectively.

Coverage of Malaria Prevention and Treatment Products

On the coverage of malaria products, three products were studied and included: ITNs, Coartem which is an anti-malarial drug (ACT1, ACT2, ACT3 and ACT4) and malaria diagnostic kits (RDTs).

The use of an ITN is one of the most effective measures used to prevent malaria. The survey shows that there was 45% and 35% coverage of Permanet in the urban and rural areas respectively in Kaduna State.

There is 95% and 50% coverage of first-line anti-malaria drug in the urban and rural areas of Kaduna State. This implies very good coverage in the urban areas, whereas coverage in the rural areas needs to be strengthened.

Coverage of Child Health Products

Coverage for the child health products for water treatment (Water Guard and PUR) were seen to be very low in both the rural and urban areas of the state. The proportion of target areas that reached the predetermined coverage standard for Water Guard was 35% for urban and 25% for rural, while that of PUR was 25% for urban and 14% for rural.

Table 35: Summary of MAP Indicators for Kaduna State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Kaduna State (%) N=38
Family planning and reproductive health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	31
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=80
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=30 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=80 Lifestyle Urban=45 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=45 Rural=35
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial	Urban=55.4 Rural=24.4	Urban=95 Rural=50
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=35 Rural=14

INDICATOR	15-State Average (%) N=722	Kaduna State (%) N=38
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water product	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=35 Rural=25 PUR Urban=25 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: KANO

SPARCS RESULTS
FAMILY PLANNING AND REPRODUCTIVE HEALTH

Awareness of family planning methods is crucial in decisions on whether to use a contraceptive method and which method to use. The survey assessed respondents' knowledge of at least 3 family planning methods and it showed that 33% of the males and 36.7% of the females could recall at least 3 family planning methods. In the 15 ESMPIN states, however, the majority of women (70.6%) could recall at least 3 family planning methods.

The proportion of women who reported they were currently using a modern method of contraception was 9.7% across the 15 ESMPIN priority states and 9.2% in Kano State. The survey showed that the proportion of respondents who mentioned opposition to use of family planning by self, partner and religion was 20.5% in Kano State and 15.1% in the 15 ESMPIN states. Some respondents in the state (6.3%) however mentioned method-related reasons as their own reasons for not using any family planning method.

The importance of spousal communication is often emphasized in family planning programs and research. Numerous studies show that the amount of communication that occurs between partners is positively associated with contraceptive use (Kamal, 1999). However, spousal communication concerning contraception, especially in developing countries, remains rare (Becker, 1996). Thus, communication interventions have been developed and implemented to encourage couples to talk about the number of children to have, birth spacing and contraceptive use.

The SPARCS survey showed that the proportion of respondents in the state that discussed FP once in the last 12 months with their cohabiting partners was 7.3% and 2.9% for males and females respectively.

The findings of the survey showed that 66.3% of the respondents in the state attended ANC visits at least 4 times during their last pregnancy.

Table 36: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Kano State

INDICATOR	15-State Average (%) N=12501	Kano State (%) N=907
Modern methods contraceptive prevalence rate	M=11.6 (n=368) F= 9.7 (n=398)	M=2.3 (n=5) F=9.2 (n=34)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	66.3 (n=175)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (n=1566)	F=36.7 (n=183) M=33.0 (n=135)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=7.3 (n=438) F=2.9 (n=450)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	20.5 (n=498)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	6.3 (n=459)

MALARIA PREVENTION AND TREATMENT

The majority of the respondents in Kano state, 62.2%, and 55.4% in the 15 ESMPIN states, reported that their children under 5 had slept under an ITN the night before the survey. There is an increase in this proportion when compared to the 43.9% reported by the NDHS, 2008 (Nigeria DHS, 2008). This survey also showed that the majority of the respondents in Kano state (98.6%) and in the 15 ESMPIN priority states (95.3%) know that ITNs can be used to prevent malaria.

Table 37: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Kano State

INDICATOR	15-State Average (%) N=12501	Kano State (%) N=907
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	62.2 (n=360)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	98.6 (n=508)

DIARRHEA AND SAFE WATER SYSTEMS

During the survey, caregivers were asked whether they knew about ORS packets and Zinc. 30.9% of respondents in the 15 states and 45% in Kano State reported knowing that ORS is an effective means of treating diarrhea among children under 5.

On the knowledge of respondents on proper storage of water and use of POU water systems as effective means of preventing diarrhea, 20.1% and 30.4% of the respondents in the 15 ESMPIN states and Kano State know that it can prevent diarrhea among children under 5. While 60.1% (15-State average) and 57.1% (Kano State) of caregivers know that proper hand washing with soap is an effective means of prevention diarrhea among children under 5.

The knowledge of POU water products for disinfection of drinking water was quite low as shown from the survey (3.3% and 8.2%) in both the 15 ESMPIN states and Kano State.

On the use of POU water treatments in households with children under 5, very few of the respondents (1.7% and 4.3%) in both the 15 ESMPIN states and Kano State use POU water treatment products.

Table 38: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Kano State

INDICATOR	15-State Average (%) N=12501	Kano State (%) N=907
Proportion of children under 5 with diarrhea treated with ORTs	12.9 (n=913)	43.7 (n=103)
proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	45.5 (n=907)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	30.4 (n=907)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	57.1 (n=907)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	4.3 (n=907)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	8.2 (n=907)

NUTRITION

The Nigeria Demographic and Health Survey report showed a 13% exclusive breastfeeding rate which is a decline from 17% indicated in 2003 report (Nigeria DHS, 2008). This survey showed that proportion of children exclusively breastfed for six months in the 15 ESMPIN state and in Kano State was 20.4% and 22.2% respectively.

Table 39: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Kano State

INDICATOR	15-State Average (%) N=12501	Kano State (%) N=907
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	22.2 (n=72)

MAP RESULTS

Coverage of Family Planning Products

The survey showed that 36% and 62% of the USG service delivery points in the 15 states and Kano state experienced stock-outs of specific contraceptive tracer drugs as at the time of the survey. These tracer drugs include OCs and condoms.

The survey also showed that there was a good coverage of OCs in the urban areas as 95% of the service delivery points visited had OCs in stock. This however, was not so in the rural areas as only 45% of the service delivery points had OCs. Cycle Beads were not easily available in the state as only 14% of the facilities in both the rural and urban areas had it in stock.

Two brands of male condoms marketed by SFH were the targets for this survey. The predetermined coverage standard is estimated at a 5-minute walk in urban areas and 10-minute walk in rural areas. Gold Circle condom has a wider coverage of about 85% in the urban areas and 14% coverage in rural areas of the state. Lifestyle condom has a low coverage of 25% and 20% respectively

Coverage of Malaria Prevention and Treatment Products

The survey showed that the target areas that reached a predetermined quality coverage standard for Permanet was 20% in the urban areas and 14% in the rural areas of the state. The anti-malaria drug marketed by SFH is Coartem (ACT1, ACT2, ACT3 and ACT4). The survey showed very low coverage of these anti-malaria which was 40% in the urban areas and 45% in the rural areas of the state.

Information on coverage area for malaria diagnosis was also collected during the survey. According to the findings from the survey, the coverage was quite low as the target areas that reached a predetermined quality coverage standard for malaria diagnosis was 30% in both the urban and rural areas of Kano State.

Coverage of Child Health Products

The coverage of these products was low as shown by the survey. Water Guard had a coverage of 55% in urban and 25% in the rural areas while PUR had a coverage of was 20% in the urban and 14% in the rural areas of the state.

Table 40: Summary of MAP Indicators for Kano State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Kano State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	62
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=45
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=85 Rural=14 Lifestyle Urban=25 Rural=20
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=20 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial.	Urban=55.4 Rural=24.4	Urban=95 Rural=90
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=30 Rural=30

INDICATOR	15-State Average (%) N=722	Kano State (%) N=38
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=55 Rural=20 PUR Urban=20 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: KATSINA

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

Promotion of family planning in countries with high birth rates has the potential to reduce poverty and hunger and avert 32% of all maternal deaths and nearly 10% of childhood deaths. It would also contribute substantially to women's empowerment, achievement of universal primary schooling, and long-term environmental sustainability (Cleland et al., 2006).

Family planning also brings large potential health and survival benefits for children, mainly as a result of wider intervals between births. Findings of studies in both rich and poor countries show that conceptions taking place within 18 months of a previous live birth are at greater risk of fetal death, low birth weight, prematurity, and being of small size for gestational age (Conde et al., 2006).

The study shows that very few of the respondents (7.3% of males and 8.6% of females) could recall at 3 three modern family planning methods.

The reasons given for not using a family planning service were grouped into the clinical (method-related reasons) and social (opposition to use by self, partner, and religious prohibitions) reasons. From the survey, it was seen that very few of the respondents (5.2%) were opposed to family planning based on the method-related reasons while the majority (35.8%) was due to opposition to use by self, partner or religion.

Discussing the use of contraceptives between husband and wife is not a prerequisite for taking up of contraception; however its absence may be a barrier to use. Lack of discussion may reflect a lack of personal interest, hostility to the subject, or customary shyness in talking about sex-related issues (Indonesia NDHS, 2002/2003). The SPARCs results show that few individuals discuss family planning (17.8% of males and 20.9% of females on average) at least once in the last 12 months, but its 2.2% and 5.9% for males and females in Katsina State.

The proportion of births receiving at least 4 ANC visits during pregnancy was 44 % for the 15 states and 47.9% for Katsina State.

Table 41: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Katsina State

INDICATOR	15-State Average (%) N=12501	Katsina State (%) N=893
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M= 2.1 (n=5) F= 1.2 (n=4)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	47.9 (n=94)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (1566)	F=7.3 (n=33) M=8.6 (n=38)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=2.2 (n=495) F=5.9 (n=425)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	35.8 (n=450)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	5.2 (n=446)

MALARIA PREVENTION AND TREATMENT

The results show that about half of the children under 5 (55.4% and 54.8%) in both the 15 ESMPIN states and Kaduna State slept under an ITN the night before the survey. The survey results also show that 95.3% and 96.5% of respondents in the 15 states and Katsina respectively demonstrated adequate knowledge of ITNs as a way to prevent malaria.

Table 42: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Katsina State

INDICATOR	15-State Average (%) N=12501	Katsina State (%) N=893
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	54.8 (n=403)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	96.5 (n=463)

DIARRHEA AND SAFE WATER SYSTEM

The proportion of children under five with diarrhea treated with ORT has been shown to be quite low for the 15 states and Katsina, 12.9% (n=913) and 9.5% (n=74) respectively. It then implies that the knowledge of treating diarrhea with ORT is very low hence the need to spread the understanding that ORT is an adequate therapy for diarrhea for children under 5.

The proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5 is low across the 15 states and Katsina, 30.8 % and 36.6% respectively. These proportions are quite low, which shows that more capacity building is required for caregivers to know and administer ORS and Zinc as an effective treatment for diarrhea.

The majority of the caregivers (60.1% for the 15 states and 72.8% for Katsina State) were aware that hand washing with soap is effective in preventing diarrhea. However, there is a need to sustain these results and build upon them on the ESMPIN project through its community based distribution in Katsina.

The proportion of respondents who live in households with children under 5 in which a POU water treatment system is used to disinfect drinking water is very low for the 15 states and Katsina, 1.7% and 0.8% respectively. This shows that there is gross inadequate knowledge of POU among respondents, and so the inability to make water safe for their drinking.

Table 43: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Katsina State

INDICATOR	15-State Average (%) N=12501	Katsina State (%) N=893
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	9.5 (n=74)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	36.6 (n=893)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	16.5 (n=893)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	72.8 (n=893)

INDICATOR	15-State Average (%) N=12501	Katsina State (%) N=893
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	0.8 (n=893)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	1.0 (n=893)

NUTRITION

This survey showed that 68.5% of women initiated breastfeeding immediately after delivery while 23.6% initiated it a few hours later. The prevalence of exclusive breastfeeding of children under 6 months of age is 20.4 % for the 15 states and 37.5 % for Katsina State. These rates are, however, very low. There is a need to intensify the messages of nutrition through exclusive breastfeeding especially for children under-6 months of age.

Table 44: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Katsina State

INDICATOR	15-State Average (%) N=12501	Katsina State (%) N=893
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	37.5 (n=56)

MAP RESULTS

Coverage of Family Planning Products

Availability of family planning products is one of the strategies involved in the increment in modern contraceptive prevalence rates. From this survey, it was discovered that 53% of SDPs experienced a stock-out of products at the time of the survey.

On the coverage of OCs, it was found that coverage in Katsina State was 60% in the urban areas and 25 % in the rural areas. Hence, the ESMPIN project and other FP/RH programs in Katsina State must ensure an intensified community based intervention to improve these results and subsequently build on them to improve the CYP of the state which is presently 2.1%.

This study shows that there is 50% and 20% coverage of Gold Circle condoms in the urban and rural locations in Katsina State. This result in the urban area may have been due to subsequent programmes that promoted the Gold Circle brand and its availability and affordability advantages. However, coverage for Lifestyle condoms is at 14% for both urban and rural locations, which is very low.

This may also be due to affordability and availability factors about the brand. Therefore, there is a need to expand the social marketing approach of the Lifestyle brand to increase its uptake.

The coverage of Cycle Beads was seen to be very poor as only 14% of facilities in both the 15 ESMPIN states and Katsina State had the product.

Coverage of Malaria Prevention and Treatment Products

The use of an ITN is one of the most effective measures used to prevent malaria. The surveys shows that there is a 30% and 14% coverage of Permanet for the urban and rural areas respectively in Katsina State. This is shown in the chart below.

There is a 60% and 45% coverage of first-line anti-malarias in the urban and rural areas of Katsina State. This implies that they are not easily available in the rural communities as compared to the urban areas.

On determining the coverage of malaria diagnostic kits, it was shown that the coverage was better in the urban areas (80%) than in the rural areas (35%). This implies that that the kits are not easily available in the rural areas.

Coverage of Child Health Products

The child health products under study are Water Guard and PUR which are also referred to as water treatment products. The coverage of both products was similar in both rural and urban areas of the state. PUR was, however, generally not available in most SDPs in comparison to the Water Guard.

Table 45: Summary of MAP Indicators for Katsina State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Katsina State (%) N=38
Family planning and reproductive health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	53

INDICATOR	15-State Average (%) N=722	Katsina State (%) N=38
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=60 Rural=25
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3, Rural=2.2	Gold Circle Urban=50 Rural=20 Lifestyle Urban=14 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=30 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial	Urban=16 Rural=5.3	Urban=60 Rural=45
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=80 Rural=35
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=35 Rural=25 PUR Urban=14 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: KEBBI

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

Only 6.5% of the male respondents and 25% of the females in Kebbi State could recall at least 3 modern family planning products. On the other hand, the majority (70.6%) of the respondents in the 15 ESMPIN states could remember at least 3 methods in the 15 states.

The proportion of all women ages 15-49 who reported that they are currently using a modern method of contraception was 1.2% in Kebbi State and 9.7% across the 15 ESMPIN-priority states. Also, 1.5% of men ages 15-60 reported they were currently using modern methods of contraception as compared to 11.6% in the 15 priority States.

The survey showed that, in Kebbi State, 11.2% of the total respondents described self, partner and religious prohibition as reason for not using family planning, while 0.9% of the respondents mentioned method-related reasons. In the 15 ESMPIN states however, 15.1% of the respondents cited opposition by self, partner and religious reasons, while 4.6% gave method-related reasons.

Although discussion between husband and wife about contraceptive use is not a precondition for adoption of contraception, its absence may be an impediment to use. 5.9% of the females and 2.2% of males reported discussing family planning with their spouses, while among the 15 states the proportion that had discussed family planning was much higher at 20.9% for females and 17.8% for males respectively.

From the survey, it has been shown that percentage of pregnant women who attended at least 4 ANC visits in Kebbi was 46.0% compared to 44% on average for the 15 ESMPIN states.

Table 46: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Kebbi State

INDICATOR	15-State Average (%) N=12501	Kebbi State (%) N=858
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=1.5 (n=4) F= 1.2 (n=4)
Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	46.0 (n=50)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (n=1566)	F=3.4 (n=15) M=6.5 (n=33)

INDICATOR	15-State Average (%) N=12501	Kebbi State (%) N=858
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=2.2(n=495) F=5.9(n=425)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1(n=6233)	11.2 (n=436)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	0.9 (n=422)

MALARIA PREVENTION AND TREATMENT

In Kebbi State, the 2008 NDHS reported that 51.7% of children under 5 slept under an ITN the night before the survey, which is above the national average of 49.8%. In the SPARCS survey, the results have shown that 65.5% of children under 5 slept under an ITN. This is also above the average for the 15 ESMPIN states which is 55.4%. Consistent with the other states, a higher percentage of respondents know that malaria can be prevented though the use of ITNs than the percentage of respondents that used ITNs. In Kebbi state, 87.2% know that malaria can be prevented through the use of ITNs.

Table 47: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Kebbi State

INDICATOR	15-State Average (%) N=12501	Kebbi State (%) N=858
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4,016)	65.5 (n=281)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	87.2 (n=431)

DIARRHEA AND SAFE WATER SYSTEM

The result shows that 24.8% of the respondents from Kebbi State have knowledge of treating diarrhea using ORS and zinc compared to the 30.8% from the 15 focal states. The survey showed that 5.7% of the respondents in Kebbi State had knowledge on the use of POU water system as an effective means of preventing diarrhea, while in the 15 ESMPIN states the proportion is 20.1%.

The findings of the survey also showed that 30.4% of caregivers were aware that hand washing with soap is an effective way of preventing diarrhea among children under 5 as against the 60.1% of the 15 states. The proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water was also determined. The result showed only 0.1% reported using POU water treatment system to disinfect drinking water while 1.7% of the respondents in the 15 ESMPIN state use a POU water treatment.

Table 48: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Kebbi State

INDICATOR	15-State Average (%) N=12501	Kebbi State (%) N=858
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	24.8 (n=942)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	5.7 (n=942)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	30.4 (n=942)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	0.1 (n=942)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	0.1 (n=942)

NUTRITION

The NDHS 2008 results show that the proportion of children breastfed within one hour of delivery is slightly higher in urban areas (41%) than in rural areas (38%). This survey however showed that 68.5% of women initiated breastfeeding immediately after delivery while 23.6% initiated it a few hours later.

The findings from Kebbi State showed that the prevalence of exclusive breastfeeding among the population sampled was 17.4% while among the 15 ESMPIN states, it is 20.4%.

Table 49: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Kebbi State

INDICATOR	15-State Average (%) N=12501	Kebbi State (%) N=858
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	17.4 (n=46)

MAP RESULTS

Coverage of Family Planning Products

Through the MAP survey, coverage for products was also assessed. On the determination of the target areas that reach a predetermined coverage standard for OCs, the survey showed that there was 95% coverage in the urban areas and 45% coverage in the rural areas in Kebbi State.

The target areas that reach predetermined coverage standard for Cycle Beads were quite few. In the rural areas, it was 14% while in the urban areas it was 20%. This shows that both access to and availability of Cycle Beads is quite poor in the state.

The survey also assessed the coverage of male condoms with a focus on Gold Circle and Lifestyle in both rural and urban areas. The findings showed that there was 65% coverage of Gold Circle in the urban areas and 30% coverage at the rural areas. Lifestyle condom coverage is still low as only 14% coverage was recorded in both the urban and rural areas of Kebbi State.

Coverage of Malaria Prevention and Treatment Products

The result revealed that only 25% of the urban areas and 20% of the rural areas sampled in the state had Permanet coverage. This shows that, the product coverage is low and requires more to be done to ensure more coverage of the product. The coverage of anti-malaria was better at 95% coverage in the urban areas and 60% coverage in rural areas of the state. The coverage for malaria diagnostic test kits showed that out of the total areas sampled, malarial diagnostic kits were available in 30% of the urban areas and 20% of the rural areas of the state.

Coverage of Child Health Products

The survey showed that coverage of PUR was 14% in the rural areas and 20% in the urban areas while the coverage for Water Guard was 20% in the rural areas and 30% in the urban areas. This is an indication of unavailability of the products as majority of the outlets did not have the products.

Table 50: Summary of MAP Indicators for Kebbi State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Kebbi State (%) N=38
Family planning and reproductive health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	45
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural= 45
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=20 Rural=20
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=65 Rural=30 Lifestyle Urban=14 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=25 Rural=20
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial	Urban=55.4 Rural=24.4	Urban=95% Rural=60%
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=30% Rural=20%
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=15.7 Rural=5.2 PUR Urban=5.2 Rural=0

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: LAGOS

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

ESMPIN employs a comprehensive strategy to enable delaying, spacing and limiting births. This strategy involves social marketing, increasing CYP, making family planning products and information available to Nigerian women, and overall, contributing to increasing CPR in Nigeria.

In Lagos State, more females (60.9%) than males (42.1%) can mention at least 3 modern contraceptive methods from oral contraceptive pills, injectables, male condoms and IUCDs.

The proportion of all women ages 15-49 who reported that they are currently using a modern method of contraception was 28.4% and 9.7% in Lagos State and in the 15 ESMPIN priority states respectively. While 31.8% of men ages 15-60 reported they were currently using modern methods of contraception compared to 11.6% in the 15 priority states.

Various reasons were given for not using family planning: 9.3% of respondents in Lagos gave method-related reasons including health concerns, lack of access, inconvenience of product use, interference with body's normal process and fear of side effects, and 7.3% of respondents mention opposition to use by self, partner and religion.

The proportion of respondents who discussed family planning at least once in the last 12 months is higher in Lagos than the 15-State Average: 39.7% and 40% of males and females respectively have discussed FP in the last 12 months.

The ESMPIN indicator addressing reproductive health is the proportion of women who attend at least 4 ANC visits. The percentage of pregnant women who attended at least 4 ANC visits in Lagos is quite low at 18.7% compared with the national average of 44%.

Table 51: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Lagos State

INDICATOR	15-State Average (%)N=12501	Lagos State (%) (N=878)
Modern Methods Contraceptive Prevalence Rate	M= 11.6 (n=368) F= 9.7 (n=398)	M= 31.8 (n=70) F= 28.4 (n=73)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (=1865)	18.7 (n=166)

INDICATOR	15-State Average (%)N=12501	Lagos State (%) (N=878)
Proportion of respondents who can recall at least 3 modern family planning products	F=70.6 (n=4399) M=25.0 (n=1566)	F=60.9 (n=257) M=42.1 (n=192)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=27 (n=474) F=29.2 (n=407)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	7.3 (n=422)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.60 (n=5472)	9.3 (n=301)

MALARIA PREVENTION AND TREATMENT

In Lagos State, the 2008 NDHS reported that 43% of children under 5 slept under an ITN the previous night. This is above the national average of 49.8%. Similarly, SPARCS reported that 32.3% of children under-5 slept under an ITN, this is also above the national average of 55.4%.

Although knowledge about ITNs is high, use is low among pregnant women and children under 5 in most ESMPIN states. A high proportion of respondents (97.9%) in Lagos State have knowledge pertaining to ITNs similar to the national average of 95.3%.This shows that respondents are aware that ITNs protect against mosquito bites that can cause malaria.

Table 52: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Lagos State

INDICATOR	15-State Average (%) N=12501	Lagos State (%) N=878
Proportion of children under 5 slept under an ITN the previous night	55.4 (n=4016)	32.3 (n=161)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	97.9 (n=420)

DIARRHEA AND SAFE WATER SYSTEM

Knowledge of POU products for water disinfection is 7.7% in Lagos State while the proportion of caregivers who know that proper storage of water and use of POU water systems are an effective means of preventing diarrhea among children under 5 is 19.1%.

The knowledge of respondents on diarrhea prevention is average: 58.6% of respondents in Lagos know that hand washing and soap can prevent diarrhea. Respondents' knowledge of the use of ORS and Zinc to treat diarrhea is at 34.5%.

Only 7.4% of respondents use POU to disinfect water while 2.7% of those whose children had diarrhea used ORS for treatment in Lagos State.

Table 53: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Lagos State

INDICATOR	15-State Average (%) N=12501	Lagos State (%) N=878
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	7.4 (n=27)
proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	34.5 (n=878)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	19.1 (n=878)
Proportion of caregivers who know that hand washing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	58.6 (n=878)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	2.7 (n=878)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	7.7 (n=878)

NUTRITION

Exclusive breast feeding is low in poor resource settings. Between 3000 and 4000 infants die from diarrhea and acute respiratory infection because they are not well

breastfed.[4] Properly breastfed babies in third world countries have been found to have lower death rates because they have fewer infections than bottle fed babies. [5]

The prevalence of exclusive breastfeeding in Lagos State is relatively higher than national average at 42.9% compared to 20.4%.

Table 54: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Lagos State

INDICATOR	15-State Average (%) N=12501	Lagos State (%) N=878
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	42.9 (n=21)

MAP RESULTS

Coverage of Family Planning Products

One self service tool is Cycle Beads which are a visual tool that help a woman establish the days when she is almost certain to be fertile. If the woman does not want to get pregnant, she and her partner avoid unprotected intercourse on days 8 through 19 of her cycle. Access to Cycle Beads in Nigeria remains low. Target areas that reach the predetermined coverage standard for Cycle Beads is extremely low in Lagos State with urban and rural areas both at 20%.

High coverage for OCs (95%) was recorded for both urban and rural areas. Coverage for male condoms is also high with Gold Circle condoms having coverage of 95% in both urban and rural areas. On the other hand, coverage for Lifestyle male condoms is low in both urban and rural areas with percentages of 30% and 20% respectively.

Product availability plays a huge role on influencing and encouraging purchase: 19% of service delivery points experienced a stock-out of specific contraceptive tracer drugs including condoms, injectables and pills.

Coverage of Malaria Prevention and Treatment Products

Permanet, the SFH LLIN brand is also available across Nigeria. The coverage for Permanet was 20% in both the rural and urban areas of Lagos State. This helps to explain why knowledge is high and use is low.

RDTs are a new technology used to quickly determine malaria parasites in blood. This tool has low coverage in both urban and rural communities of Lagos State. According to the findings from the survey, coverage is 20% and 15% in urban and rural areas

[4] Take the baby friendly initiative, UNICEF 1992

[5] Ruth Lawrence, M.D, spokesman for the American Academy of Pediatrics

respectively. However, for treatment, the percentage for coverage of anti-malarial drugs in Lagos State is 95% for both urban and rural areas. SFH distributes commonly used drugs such as Coartem (ACT1, ACT2, ACT3, and ACT4).

Coverage of Child Health Products

PUR and Water Guard are two highly effective point of use water products distributed by SFH field offices across Nigeria. The coverage for Water Guard in Lagos State is 95% for urban areas and 35% for rural areas. The predetermined coverage area for PUR is 25% for urban and 14% for rural.

Table 55: Summary of MAP Indicators for Lagos State compared to 15-State Average

INDICATOR	**15-State Average (%) N=722**	**Lagos State (%) N=38**
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	19
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=95
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.70	Urban=20 Rural=20
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=95 Lifestyle Urban=30 Rural=20
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=20 Rural=20
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malaria.	Urban=55.4 Rural=24.4	Urban=95 Rural=95
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=20 Rural=15
Diarrhea and safe water system		

INDICATOR	15-State Average (%) N=722	Lagos State (%) N=38
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=95 Rural=35 PUR Urban=25 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: OGUN

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

More females 42% (n=415) than males 25.9% (n=422) can mention at least 3 modern contraceptive methods including OCs, injectables, male condoms and IUCDs. The proportion of women currently using a modern method of family planning at the time of survey in Ogun State was 21.1%, more than double the 15-State Average of 9.7%. While 20.8% of men ages 15-60 reported they were currently using modern methods of contraception as compared to 11.6% in the 15 priority states. For those not using FP, 8.3% of respondents in Ogun State gave method-related reasons. The percentage of pregnant women who attended at least 4 ANC visits in Ogun is quite low at 26.2%.

Table 56: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Ogun State

INDICATOR	15-State Average (%) N=12501	Ogun State (%) N=888
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=2.0 (n=5) F=21.1(n=52)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1,865)	26.2 (n=184)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=25.9 (n=124) F=42.0 (n=172)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=23.5 (n=422) F=23.6 (n=415)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	10.5 (n=410)
Proportion of respondents who mention method- related reasons why they do not use a modern FP method	4.60 (n=5472)	8.6 (n=313)

MALARIA PREVENTION AND TREATMENT

In Ogun State, the 2008 NDHS reported that 58.1% of children under 5 slept under an ITN the previous night which is above the NDHS national average of 49.8%. The SPARCS report found that 42.0% of children under 5 slept under an ITN, which is below the SPARCS national average of 55.4%.

Even though knowledge about ITNs is high, use is low among pregnant women and children under five in most ESMPIN states: 95.2% of respondents know that ITNs can protect against mosquito bites that prevent malaria compared to the national average of 95.3%.

Table 57: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Ogun State

INDICATOR	15-State Average (%) N=12501	Ogun State (%) N=888
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	42.0 (n=238)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	95.2 (n=434)

DIARRHEA AND SAFE WATER SYSTEM

Less than one-quarter of the respondents, 23%, in the state know of the effectiveness of ORS and Zinc in treating malaria in children under 5 while only 15% of the respondents know that proper storage of water and use of POU water systems are effective means of preventing diarrhea.

The survey also showed that about half of the respondents (55%) were aware that hand washing with soap is effective in preventing diarrhea in children while very few of the respondents (3.3%) had heard of the POU water products. On the use of the POU water treatment systems to disinfect drinking water, the survey showed that only 2.2% of the respondents in Ogun State and 1.7% of respondents in the 15 ESMPIN states made use of the product.

Table 58: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Ogun State

INDICATOR	15 States Average (%) N=12501	Ogun State (%) N=888
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	4.8 (n=62)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n= 12501)	23.0 (n=888)

INDICATOR	15 States Average (%) N=12501	Ogun State (%) N=888
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	15.0 (n=888)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	55.8 (n=888)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	2.0 (n=888)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	3.3 (n=888)

NUTRITION

Only 7.8% of respondents in Ogun State practiced exclusive breastfeeding in the first 6 months of age, less than half of the 15-State Average.

Table 59: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Ogun State

INDICATOR	15-State Average (%) N=12501	Ogun State (%) N=888
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	7.8 (n=51)

MAP RESULTS

Coverage of Family Planning Products

Thirty-six percent of service delivery points experienced stock-outs of specific contraceptive tracer drugs including condoms, injectables and pills. Stock-out of products plays a negative role in product uptake. A lot of users become discouraged when products are not available when needed. The survey also showed that OCs were generally available in the state as the coverage was 95% and 90% in the urban and rural areas of the state respectively.

Access to Cycle Beads in Nigeria remains low as seen from SPARCS baseline survey reports. Target areas that reached the predetermined coverage standard for Cycle

Beads is extremely low in Ogun State with urban and rural areas having 20% and 10% coverage respectively.

Access to male condoms has increased over the years with people accepting it both for prevention of sexually transmitted diseases and unwanted pregnancy. Coverage for male condoms is also high with Gold Circle condoms at 95% in both urban and rural areas. On the other hand, coverage for Lifestyle male condoms is low in both urban and rural areas with a percentage of 20% and 14% respectively.

Coverage of Malaria Prevention and Treatment Products

The coverage for Permanet was 40% and 15% in the urban and rural areas of Ogun State respectively. This can also explain why knowledge is high and use is low.

The survey also collected information on coverage area for anti-malarial drugs; the most commonly used drug distributed by SFH is Coartem (ACT1, ACT2, ACT3 and ACT4). The predetermined coverage is estimated at a 10-minute walk in urban areas and 30-minute walk in rural areas. According to the findings from the survey, the target areas that reach a predetermined quality coverage standard for anti-malarial drugs was 95 % in the urban areas and 95% in the rural areas of Ogun State.

Information on the coverage area for rapid malaria diagnostic kits was also collected in different locations of Ogun State. According to the findings from the survey, the target areas that reached a predetermined quality coverage standard for RDTs were 20% in both urban and rural areas.

Coverage of Child Health Products

Coverage for Water Guard in Ogun State is 60% for urban areas and 35% for rural areas. While predetermined coverage area for PUR is 25% and 20% for urban and rural areas respectively.

Table 60: Summary of MAP Indicators for Ogun State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Ogun State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	36
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=90

INDICATOR	15-State Average (%) N=722	Ogun State (%) N=38
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=20 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural= 95 Lifestyle Urban=20 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=40 Rural=15
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial	Urban=55.4 Rural=24.4	Urban=95 Rural=95
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=20 Rural=20
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=60 Rural=35 PUR Urban=25 Rural=20

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: OYO

SPARCS RESULTS
FAMILY PLANNING AND REPRODUCTIVE HEALTH

The proportion of respondents who could name at least 3 modern methods of family planning was 58.1% for females and 46.7% for males in Oyo State.

The proportion of women who reported that they were currently using a modern method of contraception was 25.5% in Oyo, almost 3 times higher than the 15-State Average of 9.7%. While 29.8% of men ages 15-60 reported they were currently using modern methods of contraception as to 11.6% in the 15 priority states. For those not using FP, 5.8% of respondents in Oyo gave method-related reasons while 13.9% of respondents mentioned opposition to use by self, partner and religion.

The proportion of respondents who discussed family planning at least once in the last 12 months in Oyo is higher than the 15-State Average with 23.60% of males and 28.5% of females having discussed FP in the last 12 months. This aligns with the fact that Oyo State's CPR is also higher than the national average.

The percentage of pregnant women who attended at least 4 ANC visits in Oyo was 44%. This is same as the 15-State Average.

Table 61: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Oyo State

INDICATOR	15-State Average (%) N=12501	Oyo State (%) N=840
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M=29.8 (n=59) F=25.5 (n=61)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	44 (n=141)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=46.7 (n=197) F=58.1 (n=243)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	M=23.6 (n=352) F=28.5 (n=365)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	13.9 (n=418)

INDICATOR	15-State Average (%) N=12501	Oyo State (%) N=840
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.6 (n=5472)	5.8 (n=330)

MALARIA PREVENTION AND TREATMENT

Even though knowledge about ITNs is high- i.e. they know it can protect against mosquito bites that prevent malaria- use is low among pregnant women and children under five in most ESMPIN states. In Oyo, 37.9% of children under 5 slept under an ITN which is below the national average of 55.4%. In addition, 92.8% of respondents have knowledge on ITNs compared to the national average of 95.3%.

Table 62: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Oyo State

INDICATOR	15-State Average (%) N=12501	Oyo State (%) N=840
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	37.9 (n=103)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	92.8 (n=416)

DIARRHEA AND SAFE WATER SYSTEM

Knowledge of POU water treatment products (i.e Water Guard and PUR) as products for water disinfection is 15.5% (n=840) while knowledge of POU products and proper storage of water to prevent diarrhea is 3.6% (n=840).

Very few caregivers in the state (15.50%) and in the 15 ESMPIN states (20.1%) were aware that proper storage of water and use of POU water systems were effective in preventing diarrhea among children.

Also, households that used POU water treatment to disinfect drinking water was 2.0% in Oyo State and 1.7% in the 15 ESMPIN states. This is expected since there was very little awareness of these products among the respondents.

This result, therefore, emphasizes the need for community enlightenment campaigns on diarrhea and safe water systems.

The survey showed that 30.8% (n=840) and 60.0% (n=12501) of the respondents in Oyo State and the 15 ESMPIN states were aware that hand washing with soap is effective in diarrhea prevention. However, 35.2% of respondents in Oyo State and 30.8% of the respondents in the 15 ESMPIN states know that ORS and Zinc can be used to treat diarrhea. These figures imply the low level of knowledge of respondents on both the prevention and treatment of diarrhea.

Very few children under 5 (17.2% in Oyo State and 12.9% in the 15 ESMPIN states) received ORT during an episode of diarrhea in the 2 weeks preceding the survey.

Table 63: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Oyo State

INDICATOR	15-State Average (%) N=12501	Oyo State (%) N=840
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	17.2 (n=29)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	35.2 (n=840)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	15.5 (n=840)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	30.8 (n=840)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	2.0 (n=840)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	3.6 (n=840)

NUTRITION

This survey showed that 12.9% (n=31) exclusively breastfed their infants for 6 months in the state. In the 15 ESMPIN states, the rate of exclusive breastfeeding is equally low at 20.4%.

Table 64: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Oyo State

INDICATOR	15-State Average (%) N=12501	Oyo State (%) N=840
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	12.9 (n=31)

MAP RESULTS

Coverage of Family Planning Products

Twenty-six percent of service delivery points, experienced stock-outs of specific contraceptive tracer drugs including condoms, injectables and pills. Stock-out of products plays a negative role on product uptake as users become discouraged when products are not available when needed. The coverage of OCs in both the rural and urban areas of the state is 95%. This is an indication of good coverage and accessibility.

Access to Cycle Beads in Nigeria remains low as seen from SPARCS baseline survey reports. Target areas that reach the predetermined coverage standard for Cycle Beads were extremely low in Oyo State with urban and rural areas having 14% and20% respectively.

Coverage for male condoms is also high with Gold Circle condoms having coverage of 95% in both urban and rural areas. On the other hand, coverage for Lifestyle male condoms is low in both urban and rural areas with percentages of 30% and 20% respectively.

Coverage of Malaria Prevention and Treatment Products

The target areas that reached a predetermined coverage for Permanet were 35% and 15% in the urban and rural areas respectively. The coverage area for anti-malarial drugs in Oyo State for both urban and rural areas is 95% coverage. The most commonly used drug distributed by SFH is Coartem (ACT1, ACT2, ACT3, and ACT4).

Information on coverage area for rapid malaria diagnostic kit was also collected in different locations of Oyo State. RDT which is a new technology used to quickly determine malaria parasites in the blood have a low coverage in both urban and rural areas of Oyo State. According to the findings from the survey, coverage is 20% and 15% in urban and rural areas respectively.

Coverage of Child Health Products

Coverage for POU products are seen to be low in the SPARCS survey. Coverage for Water Guard in Oyo is 45% for urban areas and 20% for rural areas. Predetermined coverage area for PUR is 25% for urban and 14% for rural.

Table 65: Summary of MAP Indicators for Oyo State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Oyo State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	26
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=95 Rural=95
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=20
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17 Rural=2	Gold Circle Urban=95 Rural=95 Lifestyle Urban=25 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanent	Urban=16 Rural=5.3	Urban=35 Rural=15
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial	Urban=55.4 Rural=24.4	Urban=95 Rural=95
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=15 Rural=20
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=45 Rural=20 PUR Urban=25 Rural=14

**Thirty-eight localities were visited in each state divided into urban and rural localities. This resulted in a total of 722 localities visited.*

RESULTS BY STATE: RIVERS

SPARCS RESULTS

Indices from the SPARCS survey showed that CPR among females is low in Rivers State (15.1%) compared to the national average. The survey results show that a moderate number of mothers practice exclusive breastfeeding in Rivers State while a slightly lower number of caregivers are knowledgeable about the benefits of hand-washing and using ITNs. Caregiver knowledge has not translated into practice as very few children under 5 slept under an ITN the night before the survey (32.3%). Although higher than the national average of 12%, caregiver knowledge of the use of ORTS to treat children under 5 with diarrhea remains low at 16%.

Baseline results also show that though coverage for OCs in Rivers State is high (100%) and SDPs experiencing stock-outs of specific contraceptive tracer drugs is very low, knowledge of methods of contraception was low as the respondents who can recall at least 3 modern family planning products were very few (Female 21.7%, Male 17.3%).

Moreover, the rate of opposition to the use of FP/RH products is relatively low as 15% of respondents mention opposition to use by self, partner, or religious prohibitions as a reason why they do not use an FP method while 6.2% also mentioned method-related reasons why they do not use a modern FP method.

FAMILY PLANNING AND REPRODUCTIVE HEALTH

21.1% of females and 17.3% of male respondents were able to mention at least three family planning methods.

Contraceptive prevalence rate is the proportion of women of reproductive age who are using or whose partner is using a contraceptive method at a given time. It was reported in the Nigeria Demographic Health Survey, 2008 that this rate was 9.7%.

The survey showed that the proportion of women and men who reported using a modern method of contraception was 15.1% and 16% respectively. On average, the proportion of women and men in the 15 ESMPIN states was 9.7% women and 11.6% respectively.

Respondents in the survey gave various reasons given for not using family planning. These reasons are split into clinical (method-related reasons) and social (opposition to use by self, partner, and religious prohibitions) reasons.

Results from the survey indicate that 15.1% from the 15 states and 15.0% from Rivers State reported having faced opposition from themselves, their partners or their religion. This implies there is minor opposition from partners and religion to family planning in these areas. Furthermore, 6.2% of respondents from the 15 states and 4.6% of

respondents from Rivers State mentioned effects and other method-related reasons why they do not use family planning. Though figures are impressively low, it implies that many women do not take up any family planning method because of the effects associated with these methods. The above findings underscore the need for education and increased awareness on the different family planning methods and their effects to increase uptake in these communities.

During the survey, 7.9% of males and 8% of female in Rivers State admitted to having discussed family planning at least once in the last 12 months while across the 15 ESMPIN states it was 17.8% and 20.9% for male and females respectively.

Data from the survey showed that 44.0% (n=1865) in the 15 states had at least 4 ANC visits while 42.6% (n=115) of women in Rivers State had a minimum of 4 ANC visits.

Table 66: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Rivers State

INDICATOR	15-State Average (%) N=12501	Rivers State (%) N=732
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M= 16.0 (n=26) F= 15.1 (n=27)
Proportion of respondents who can recall at least 3 modern family planning products	44 (n=1865)	42.6 (n=115)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=25.0 (n=1566) F=70.6 (n=4399)	M= 17.3 (n=62) F= 27.1 (n=101)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	M=17.8 (n=6178) F=20.9 (n=6146)	F=8 (n=463) M=7.9 (n=456)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	15.1 (n=6233)	15 (n=373)

MALARIA PREVENTION AND TREATMENT

32.3% of pregnant mothers slept under ITNs while 5.1% of children under 5 slept under mosquito nets the night before the survey. This underscores the need for increased awareness on the importance of ITN use for children under 5.

The survey also showed that 92.5% of respondents in the state and 95.3% of the respondents across the 15 ESMPIN states know that ITNs can protect against mosquito bites and thus prevent malaria.

Table 67: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Rivers State

INDICATOR	15-State Average (%) N=12501	Rivers State (%) N=732
Proportion of children under 5 who slept under an ITN the previous night	4.60 (n=5472)	6.2 (n=321)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	55.4 (n=4016)	32.3 (n=257)

DIARRHEA AND SAFE WATER SYSTEM

POU water treatment technology has emerged as an approach that empowers people and communities without access to safe water to improve water quality by treating it in the home. 20.1% (n=12501) of respondents across the 15 ESMPIN states and 17.8% (n=732) of respondents in Rivers State know that use of POU water systems is an effective means of preventing diarrhea among children under 5.

This survey indicates that 1% and 1.7% of the households in the state and across the 15 ESMPIN states use a POU water treatment system to disinfect their drinking water. Washing hands with soap prevents diarrhea, but children with the highest risk of death from diarrhea are those younger than 1 year, who are too young to wash their own hands. The survey revealed that 60.1% of caregivers in the 15 states and 52.7% of caregivers in Rivers state know that hand washing with soap is an effective means of preventing diarrhea among children under 5.

This survey also showed that 30.8% of respondents in the 15 states and 20.1% in Rivers State were aware that ORS and Zinc were effective means of treating diarrhea among children under 5. Thus, there is a need for interventions on hand-washing to be scaled up in these areas in order to ensure an increase in knowledge among caregivers.

In Rivers state, only 3.4% have heard about point of use (POU) water products for disinfection of drinking water. This is very similar to the 15 ESMPIN states averages of 3.3%.

12.9% of respondents from the 15 states and 16% of respondents from Rivers State had treated children under-5 years with ORT during an incidence of diarrhea.

Table 68: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Rivers State

INDICATOR	15-State Average (%) N=12501	Rivers State (%) N=732
Proportion of children under 5 with diarrhea treated with ORT	95.3 (n=6297)	92.5 (n=372)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	12.9 (n=913)	16 (n=25)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	30.8 (n=12501)	20.1 (n=732)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	20.1 (n=12501)	17.8 (n=732)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	60.1 (n=12501)	52.7 (n=732)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	3.4 (n=732)

NUTRITION

Fifteen percent of respondents from Rivers State and 20.4% of respondents across the 15 ESMPIN states exclusively breastfed children less than 6 months of age at the time the survey was conducted.

Table 69: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Rivers State

INDICATOR	15-State Average (%) N=12501	Rivers State (%) N=732
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	15 (n=40)

MAP RESULTS

Coverage of Family Planning Products

The MAP survey showed that 29% of facilities in Rivers State had experienced a stock-out of specific contraceptive tracer drugs, while 36% of facilities across the 15 states experienced stock-outs.

The coverage for OCs in the urban and rural areas of the state was 95% and 80% respectively. This implies that OCs are available to many individuals within the communities of study.

The MAP survey showed that the coverage of Cycle Beads was 25% and 14% in the urban and rural communities of Rivers State. These figures are relatively low and point at the need for an intervention to be directed towards these areas in order to scale up the coverage range by ensuring availability of product at all times thus increasing CYP.

The two brands of male condoms marketed by SFH are the Gold Circle and Lifestyle. Coverage for Gold Circle condom was 95% in both the urban and rural areas of the state while coverage for Lifestyle was 50% in the urban and 14% in the rural communities.

Coverage of Malaria Prevention and Treatment Products

Data from the MAP survey showed that coverage of Permanet in the urban and rural communities were 45% and 20% respectively. These figures are quite low, and emphasize the need for intervention strategies to be scaled up in the areas where the study was conducted.

Information was also collected on the coverage of anti-malarial drugs. The brand distributed by SFH is Coartem (ACT1, ACT2, ACT3, and ACT4). Coverage of these first line anti-malarial drugs was 80% and 30% in both the urban and rural areas of the state.

Information on the coverage of rapid malaria diagnostic kits was also collected in different locations of the state. According to the findings from the survey, the target areas that reached a predetermined coverage area for RDTs were 35% in the urban areas and 20% in the rural areas of state.

Coverage of Child Health Products

Information was also collected on child health products which included PUR and Water Guard. The coverage of Water Guard was 65% in the urban and 25% in rural areas of the state, while the coverage for PUR was 25% and 20% in the urban and rural areas respectively.

Table 70: Summary of MAP Indicators for Rivers State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Rivers State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	29
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=1.70	Urban=95 Rural=80
Proportion of target areas that reach a predetermined coverage standard for Cycle Beads	Urban=4.1 Rural=1.7	Urban=25 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 LifeStyle Urban=17.3 Rural=2.2	Gold Circle Urban= 95 Rural=95 LifeStyle Urban= 50 Rural = 14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=45 Rural=20
Proportion of target areas that reach a predetermined quality coverage standard for first line anti-malarial.	Urban=55.4 Rural=24.4	Urban=80 Rural=30
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban= 31.6 Rural=16.5	Urban=35 Rural=20
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=65 Rural=25 PUR Urban=25 Rural=20

RESULTS BY STATE: SOKOTO

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

Among the total respondents in Sokoto State, 14.1% of females were able to recall 3 modern family planning products compared to 19.8% of males, while the average national figure for the survey was 70.6% of females compared to 25% of males.

The survey showed that 1.2% of females and 3.1% of males in the state use a modern method of contraception while the proportion of females and males that use a modern method of contraception in the 15 ESMPIN states was 9.7% and 11.6% respectively. 4.6% and 0.9% of the respondents in the 15 ESMPIN states and Sokoto State respectively, mentioned method-related reasons for not using a modern family planning method.

8.0% of females and 7.9% of males reported discussing FP with spouses, while the national average for this was 20.9% for males and 17.8% for females.

The ESMPIN project indicator for reproductive health, however, is the number of births that receive a minimum of 4 ANC visits during pregnancy. The proportion of the respondents that attended at least 4 ANC visits was 54.5% compared to 44% from the 15 ESMPIN states.

Table 71: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Sokoto State

INDICATOR	15-State Average (%) N=12501	Sokoto State (%) N= 925
Modern methods contraceptive prevalence rate	M= 11.6 (n=368) F= 9.7 (n=398)	M= 3.1 (n=8) F= 1.2 (n=9)
Proportion of births receiving at least 4 ANC visits during pregnancy	44 (n=1865)	54.5 (n=77)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	F=19.8 (n=92) M=14.1 (n=65)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	F=8.0 (n= 463) M=7.9 (n=456)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	9.0 (n=465)

INDICATOR	15-State Average (%) N=12501	Sokoto State (%) N= 925
Proportion of respondents who mention method- related reasons why they do not use a modern FP method	4.60 (n=5472)	0.9 (n=454)

MALARIA PREVENTION AND TREATMENT

In Sokoto State, the 2008 NDHS reported that 39.1% of children under 5 slept under an ITN the previous night, which is above the national average of 49.8%. The SPARC survey however showed that 54.6% of children under 5 slept under ITNs.

The percentage of respondents who know that malaria could be prevented through ITN use is 97.8% for Sokoto State compared to the 15-State Average of 95.3%. This indicates a high level of knowledge in Sokoto State.

Table 72: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Sokoto State

INDICATOR	15-State Average (%) N=12501	Sokoto State (%) N= 925
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	54.6 (n=377)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	97.8 (n=416)

DIARRHEA AND SAFE WATER SYSTEM

The results show that 35.1% and 30.8% of the respondents from Sokoto State and the 15 ESMPIN states respectively have the knowledge of treating diarrhea using ORS and Zinc.

The proportion of respondents who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea was 25% for Sokoto State compared to the 15-State Average of 20.1%. The survey showed that only 1.1% of the respondents in the state had heard about the POU water products while the 15-State Average showed that only 3.3% of the sample population had heard about the products.

This survey showed that 53.5% of the caregivers in the state know that hand washing with soap is an effective way of preventing diarrhea among children under 5 compared to 60.1% of caregivers in the 15 ESMPIN states.

Table 73: Summary of SPARCS Key Indicators for Diarrhea and Safe Water Systems Comparing 15-State Average and Sokoto State

INDICATOR	15-State Average (%) N=12501	Sokoto State (%) N= 925
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	11.8 (n=110)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	35.1 (n=925)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	25.0 (n=925)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	53.5 (n=925)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	53.5 (n=925)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	1.1 (n=925)

NUTRITION

The survey showed that 20.4% and 13.2% of respondents in the 15 ESMPIN states and Sokoto State respectively breastfed exclusively.

Table 74: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Sokoto State

INDICATOR	15-State Average (%) N=12501	Sokoto State (%) N= 925
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	13.2 (n=53)

MAP RESULTS

Coverage of Family Planning Products

In determining the level of stock-outs of specific contraceptive tracer drugs (SDPs) such as OCs and male condoms, USG-assisted service delivery points showed that 31% of the service delivery points sampled experienced stock-outs in Sokoto State, while the 15-State Average for stock-outs was 36%.

In determining the coverage for OCs, the survey showed that there was 70% coverage in urban areas and 55% in rural areas. Target areas that reached predetermined coverage standard for Cycle Beads were 20% and 14% respectively from the urban and rural areas in Sokoto State.

The survey also determined the coverage of male condoms in both rural and urban areas, with reference to Gold Circle and Lifestyle brands (brands marketed by SFH). It was shown that 95% coverage was recorded for Gold Circle in the urban areas of Sokoto State, while the rural areas recorded 80% coverage. The coverage of Lifestyle from the report was very low, with 25% coverage in the urban areas and 14% coverage for the rural areas.

Coverage of Malaria Prevention and Treatment Products

To determine the coverage of ITNs in Nigeria, the MAP survey assessed the availability of Permanet in Sokoto State in both urban and rural areas. The results showed that the coverage was 20% in the urban areas and 14% in the rural areas.

Through the MAP survey, information on coverage area for anti-malarial drugs was also collected. The commonly used drug distributed by SFH is Coartem (ACT1, ACT2, ACT3 and ACT4). The results showed that there was 95% coverage in the urban areas and 70% coverage in rural areas of Sokoto State, indicating that the drugs were available in both the urban and rural areas of the state.

These findings revealed that out of the total areas sampled, malarial diagnosis centres were present in 75% of the urban areas and 45% of the rural areas.

Coverage of Child Health Products

The survey showed that there was availability of Water Guard in 56.4% of the urban areas sampled within the 15 states while availability in the urban areas of Sokoto State was 40% and 14% in the rural areas of the state.

For the coverage of PUR, the survey showed that the coverage in the urban areas sampled within the 15 states was 6.1% and 0.8% in the rural areas of the states.

Table 75: Summary of MAP Indicators for Sokoto compared to 15 States Average

INDICATOR	15 States Average (%) N=722	Sokoto State (%) N=38
Family Planning and Reproductive Health		
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	31
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=75 Rural=45
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=20 Rural=14
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=95 Rural=80 Lifestyle Urban=25 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=20 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial.	Urban=55.4 Rural=24.4	Urban=95 Rural=70
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=75 Rural=45
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=40 Rural=14 PUR Urban=14 Rural=14

RESULTS BY STATE: ZAMFARA

SPARCS RESULTS

FAMILY PLANNING AND REPRODUCTIVE HEALTH

The ESMPIN approach to strengthening reproductive health services is offered within the context of a comprehensive health services reform package that aims to improve access to reproductive and family planning services in the community. It includes the private sector, social marketing, increasing Couple Years of Protection, making FP products and information available to Nigerian women, and overall, contributing to the increase of the Contraceptive Prevalence Rate in Nigeria.

The knowledge of the respondents on family planning methods were also assessed during the survey. Table 76 below shows the percentage of respondents who could recall at least 3 modern family planning products.

Among the total respondents in Zamfara State, 3.3% of females recalled 3 modern family planning products as against 21.6% of males, while the 15-state average figure for the survey was 70.6% females compared to 25% males.

On the proportion of those that discussed family planning with their spouse in the last 12 months, 7.6% of females and 6.5% of males reported discussing it with spouses, while the 15-state average for this was 20.9% for females and 17.8% for males.

The proportion of people currently using a modern method of family planning at the time of survey in Zamfara State for all women ages 15-49 was 1.3% in Zamfara State and 9.7% across the 15 ESMPIN priority states. 3.6% of men ages 15-60 reported currently using modern methods of contraception as compared to 11.6% in the 15 priority states. It is clear from this that males report greater use of modern methods of contraception compared to use among females in both Zamfara State and the 15 priority states of ESMPIN.

It was also shown that, in Zamfara State, 3.3% of the respondents mentioned method-related reasons why they are not using family planning as against the 15-state average of 4.6%.

The survey also determined the attitudes of respondents toward the use of modern family planning, specifically the level of opposition to family planning. Data from the survey revealed that, in Zamfara State, out of the total population sampled, 7.2% are opposed to use of family planning as a result of self, partner or religious prohibition, while the 15-state average revealed a 15.1% opposition due to the same reasons.

The major objective of antenatal care is to ensure optimal health outcomes for the mother and the baby. Antenatal care from a trained provider is important to monitor the pregnancy and reduce morbidity risks for the mother and child during pregnancy and delivery. Antenatal care provided by a skilled health worker enables:

- Early detection of complications and prompt treatment (e.g., detection and treatment of sexually transmitted infections);
- Prevention of diseases through immunization and micronutrient supplementation;
- Birth preparedness and complication readiness;
- Health promotion and disease prevention through health messages and counseling of pregnant women.

Findings from SPARCS demonstrate that the percentage of pregnant women who attended at least 4 ANC visits in Zamfara State is low at 51%.

Table 76: Summary of SPARCS Key Indicators for Family Planning and Reproductive Health Comparing 15-State Average and Zamfara State

INDICATOR	15-State Average (%) N=12501	Zamfara State (%) N=702
Modern methods contraceptive prevalence rate	M=11.6 (n=368) F=9.7 (n=398)	M=3.6 (n=7) F=1.3 (n=4)
Proportion of births receiving at least 4 ANC visits during pregnancy	44.0 (n=1865)	50.7 (n=71)
Proportion of respondents who can recall at least 3 modern family planning products	M=25.0 (n=1566) F=70.6 (n=4399)	M=2.6(n=71) F=3.3 (n=12)
Proportion of respondents who have discussed FP at least once in the last 12 months with spouse or cohabiting partner	M=17.8 (n=6178) F=20.9 (n=6146)	F=7.6 (n=368) M=6.5 (n=321)
Proportion of respondents who mention opposition to use by self, partner, religious prohibitions as a reason why they do not use an FP method	15.1 (n=6233)	7.2 (n=374)
Proportion of respondents who mention method-related reasons why they do not use a modern FP method	4.60 (n=5472)	3.3 (n=364)

MALARIA PREVENTION AND TREATMENT

In Zamfara State, the 2008 NDHS reported that 43.0% of children under 5 slept under an ITN the previous night, which is below the national average of 49.8%.

The use of ITNs is currently considered the most cost-effective method of malaria prevention in highly endemic areas. The use of ITNs or LLINs is the main method of malaria prevention employed in Nigeria. SPARCS reported that 74.8% of children under 5 slept under an ITN the previous night. This result shows that the use of an ITN the night before the survey is high in Zamfara State, but there is still need for more campaigns throughout the 15 states to make ITNs available and encourage their use, to ensure child health and reduce child mortality as a result of malaria. There is a high level knowledge in Zamfara State on the use of ITNs in preventing Malaria, with the state having 92.8% against the 95.3% of the 15 states of respondents who know that malaria can be prevented through ITN use.

Table 77: Summary of SPARCS Key Indicators for Malaria Prevention and Treatment Comparing 15-State Average and Zamfara State

INDICATOR	15-State Average (%) N=12501	Zamfara State (%) N=702
Proportion of children under 5 who slept under an ITN the previous night	55.4 (n=4016)	74.8 (n=286)
Proportion of respondents who know that malaria can be prevented through the use of ITNs	95.3 (n=6297)	92.8 (n=373)

DIARRHEA AND SAFE WATER SYSTEM

The result shows that 17.7% of the respondents from Zamfara State have knowledge of treating diarrhea using ORS and Zinc as against the 30.8% from the 15 focal states out of the total respondents.

On the proportion of respondents who know that proper storage of water and use of POU water treatment systems are effective means of preventing diarrhea, the survey found that 17.8% of the total respondents have knowledge about the use of POU water treatment system as effective means of preventing diarrhea as against the 15-state average of 20.1% as shown in the chart below.

The knowledge component of the diarrhea and safe water system also looked at households with children under 5 in which POU water treatment system is used to disinfect drinking water in Zamfara State. Out of the total respondents interviewed in the state only 1.1% reported using POU water treatment system to disinfect drinking

water, against 1.7% in the 15 states. This shows that more needs to be done in terms of marketing the product and sensitization on the need for the use of the product.

Knowledge of hand washing in relation to diarrhea was also assessed during the survey, looking at washing hands with soap and its effectiveness in preventing childhood diarrhea. Out of the total respondents from Zamfara State, the survey revealed that, 83.4% of caregivers know that hand washing with soap is an effective way of preventing diarrhea among children under 5 as against the 60.1% of the 15 states.

Availability of correct information on the POU water product is another important topic, about which questions were asked on whether the respondents heard about the POU water product for disinfection of drinking water. The information is to be used to determine the level of coverage of the media campaign of the products. It was revealed that, in Zamfara State, only 1.7% of the respondents reported hearing about the POU water products for disinfection of drinking water, while in the 15 states only 3.3% of the total sample population had heard of the products. This shows that the media campaign needs to be expanded to provide correct and adequate information on the availability of the POU water product and its use in disinfecting drinking water.

Table 78: Summary of SPARCS Key Indicators for Diarrhea and Safe Water System Comparing 15-State Average and Zamfara State

INDICATOR	15-State Average (%) N=12501	Zamfara State (%) N=702
Proportion of children under 5 with diarrhea treated with ORT	12.9 (n=913)	4.2 (n=95)
Proportion of caregivers who know that ORS and Zinc are effective means of treating diarrhea among children under 5	30.8 (n=12501)	17.7 (n=702)
Proportion of caregivers who know that proper storage of water and use of POU water systems are effective means of preventing diarrhea among children under 5	20.1 (n=12501)	17.4 (n=702)
Proportion of caregivers who know that handwashing with soap is an effective means of preventing diarrhea in children under 5	60.1 (n=12501)	83.4 (n=702)
Proportion of households with children under 5 in which a POU water treatment system is used to disinfect drinking water	1.7 (n=12501)	1.1(n=702)
Proportion of respondents who have heard of POU water products for disinfection of drinking water	3.3 (n=12501)	1.7 (n=702)

NUTRITION

The findings from Zamfara State revealed that the prevalence rate of exclusive breastfeeding among the total sampled was 25% which is above the 20.4% average of the 15 states sampled.

Table 79: Summary of SPARCS Key Indicator for Nutrition Comparing 15-State Average and Zamfara State

INDICATOR	15-State Average (%) N=12501	Zamfara State (%) N=702
Prevalence of exclusive breastfeeding of children under 6 months of age	20.4 (n=671)	25 (n=40)

MAP RESULTS

Coverage of Family Planning Products

The survey, in an effort to determine level of stock-outs of specific contraceptive tracer drugs like male condoms, injectables, OCs and IUCD in USG assisted service delivery points, found that 56% of the total sample experienced stock-outs in Zamfara State, while the 15-state average for stock-outs stands at 36%.

The findings from MAP show 14% coverage for both the urban and rural areas. Another area which the survey covers is on the proportion of target areas that reach predetermined coverage of OCs. In Zamfara State, both urban and rural communities were sampled, with 70% coverage in the urban areas and 55% of the rural areas.

The survey also measured male condom coverage in both rural and urban areas, with a focus on Gold Circle and Lifestyle brands. There was 70% coverage of Gold Circle in the urban areas as against the 20% coverage of Lifestyle. There was 14% coverage of Lifestyle in rural areas and 20% coverage of Gold Circle.

Coverage of Malaria Prevention and Treatment Products

To determine the coverage of ITN in Nigeria, the MAP survey assessed the availability of Permanet in Zamfara State in both urban and rural areas. The result revealed that, only 25% of the urban areas and 14% of the rural areas sampled in the state have Permanet coverage. This shows that, the product coverage is low and requires more to be done to ensure more coverage of the product. It should also be made affordable and accessible to the communities there. This coverage may be as a result of the fact that SFH is the sole supplier of the product in the country.

Anti-malarial drugs are used in the treatment of malaria and it is important that they are available and affordable. In order to determine the availability and coverage of the

drugs, MAP survey assessed the coverage of the anti-malarial drugs in Zamfara State and revealed that there is 80% coverage in the urban areas and 90% coverage in rural areas of Zamfara State, indicating that they are available in both the urban and rural areas of the state.

These findings revealed that out of the total areas sampled, malarial diagnosis centers are available in 45% of the urban areas and 20% coverage of the rural areas. This seems very low and insufficient, considering that malaria is one of the major causes of child and maternal mortality in Nigeria. There is, therefore, an urgent need to ensure that diagnosis and treatment centers are available in all the communities.

Coverage of Child Health Products

The survey showed that 30% of the urban areas sampled in Zamfara State had Water Guard in-stock compared to only 14% of rural areas. PUR water product was also sampled with 14% availability at both urban and rural areas.

Availability of correct information on the POU water product is another important topic, about which questions were asked on whether the respondents heard about the POU water product for the disinfection of drinking water. The information is to be used to determine the level of coverage of the media campaign of the products. It was revealed that, in Zamfara State, only 1.7% of the respondents reported hearing about the POU water products for disinfection of drinking water, while in the 15 states only 3.3% of the total sample population heard about the products. This shows that the media campaign needs to be expanded to provide correct and adequate information on the availability of the POU water product and its use in disinfecting drinking water.

Table 80: Summary of MAP Indicators for Zamfara State compared to 15-State Average

INDICATOR	15-State Average (%) N=722	Zamfara state (%) N=38
Proportion of USG assisted service delivery points experiencing stock-outs of specific contraceptive tracer drugs offered by the SDPs	36	56
Proportion of target areas that reach a predetermined coverage standard for OCs	Urban=90.6 Rural=48.8	Urban=70 Rural= 55
Proportion of target areas that reach a predetermined coverage standard for CycleBeads	Urban=4.1 Rural=1.7	Urban=14 Rural=14

INDICATOR	15-State Average (%) N=722	Zamfara state (%) N=38
Proportion of target areas that reach a predetermined coverage standard for male condoms	Gold Circle Urban=89.7 Rural=50.4 Lifestyle Urban=17.3 Rural=2.2	Gold Circle Urban=70 Rural=40 Lifestyle Urban=35 Rural=14
Malaria prevention and treatment		
Proportion of target areas that reach a predetermined coverage standard for Permanet	Urban=16 Rural=5.3	Urban=25 Rural=14
Proportion of target areas that reach a predetermined quality coverage standard for first line antimalarial	Urban=55.4 Rural=24.4	Urban= 45 Rural=30
Proportion of target areas that reach a predetermined coverage standard for malaria diagnosis	Urban=31.6 Rural=16.4	Urban=45 Rural=20
Diarrhea and safe water system		
Proportion of target areas that reach predetermined coverage standard for USAID supported POU water products	Water Guard Urban=56.4 Rural=10.4 PUR Urban=6.1 Rural=0.8	Water Guard Urban=30 Rural=14 PUR Urban =14 Rural=14

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