ASSESSMENT OF FAMILY PLANNING USE IN BAUCHI AND SOKOTO STATES, NIGERIA

JULY 2015

DISCLAIMER

ACKNOWLEDGEMENTS

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ACRONYMS

CHEW   Community health extension workers

CPR   Contraceptive prevalence rate

CYP   Couple years of protection

DDIC   Direct Delivery and Information Capture

DHS   Demographic and Health Surveys

DQA   Data quality assurance

FP   Family planning

HMIS   Health Management Information System

IDI   In-depth interviews

IUD   Intrauterine device

LGA   Local government area

LQAS   Lot Quality Assurance Survey

M&E   Monitoring and evaluation

MICS   Multiple Indicator Cluster Survey

MNCH   Maternal, newborn and child health

NARHS   National HIV/AIDS and Reproductive Health Survey

NHMIS   National Health Management Information System

RIRF   Requisition, Issue and Report Forms

SFH   Society for Family Health

TSHIP   Targeted States High Impact Project

WRA   Women of reproductive age

EXECUTIVE SUMMARY

USAID Nigeria selected Bauchi and Sokoto States in 2009 for their Focus State Strategy, which called for significant investments in governance, basic education, and health of women and children. With health status in both states being generally poor, there was an urgent need to invest resources to improve coverage of key interventions.

According to the Nigerian 2008 Demographic and Health Surveys (DHS), only 1% of children were fully immunized in both states and a majority (over 80%) of births were delivered by non-skilled providers. The fertility rate in both states was also above eight children per woman and the modern contraceptive prevalence rate (CPR) was 2%. As a result and as part of USAID-funded health activities, efforts to increase access to family planning (FP) services for women who desire to space and limit births were implemented.

The focus of this report is to understand the family planning context in Northern Nigeria through a literature review. It will also assess changes in modern contraceptive use in Bauchi and Sokoto States between 2009 and 2014 using household survey and facility-level data, and contextualize the quantitative findings with a qualitative study.

Literature Review

Findings from the 27 articles published between 2008 and 2014 included in the literature review fell into three themes: fertility preferences; family planning knowledge, attitudes, and behavior; and family planning service delivery. Males and females in Northern Nigeria desired large families due to multiple factors ranging from religious beliefs to economic security.

Due to the high value placed on children, most studies found limiting childbearing to be a controversial or disliked practice, while child spacing was generally accepted. Though large families are the norm in this region, studies found that women tended to want fewer children than men, but were often unable to successfully limit or space children due to gender dynamics within relationships.

Although knowledge about contraception was relatively high, misconceptions about contraception were abundant. Misinformation about contraception created a fearful and skeptical attitude toward contraception.

Fears also prevented couples from discussing contraceptive use within their relationship, which sometimes led to covert use of contraception by women within marriage. Contraceptive use was low in Northern Nigeria and varied by multiple socio-demographic variables, such as age, education, religion, marital status and parity.

The major findings with regard to service delivery were

- Community-based distribution of injectable contraceptives was feasible
- Family planning providers with more training had more accurate knowledge and positive attitudes about modern contraception than those with less training
- Limited hours of operation as well as limited stock of contraceptives prevented Northern

Nigerians from accessing contraception

Quantitative Findings

The modern contraceptive prevalence was reported as between 2% and 3% for most household surveys in Bauchi from 2008 to 2014, and between 0.6 and 2% for Sokoto. For most household surveys, the contraceptive prevalence rate reported in Bauchi exceeded that of Sokoto.

There was no apparent increase in modern method contraceptive use in either state from January 2012 to July 2014 in the contraceptive uptake at private facilities. Male condoms were the top commodity supplied for both states in private facilities – more so for Bauchi than Sokoto.

The number of public facilities reporting commodity needs in both Bauchi and Sokoto significantly increased over the study period. Couple years of protection (CYP) consistently increased in Bauchi public facilities from 2009 to 2014.

In terms of CYP equivalents, injectables and implants emerged as the main methods contributing to CYP in Bauchi – with implants surpassing injectables in 2013. Intrauterine devices (IUD), oral contraceptives and male condoms continued to increase through 2014, however, more modestly than the increase seen for implants and injectables.

CYP in Sokoto increased from 2011 through 2013. The reported CYP in 2014 was less than what was reported in 2013. When examining the data by CYP equivalents – injectable use increased most dramatically between 2011 and 2012, and continued to increase between 2012 and 2014, but at a slower pace.

The same pattern was observed for oral contraceptive use, albeit at a lower level than injectables. Implant use increased between 2012 and 2013, but fell to a lower level in 2014. The same pattern, at a lower level, was seen for intrauterine device (IUD) use.

The total CYP for every method, except IUD and condoms, was higher in Sokoto than in Bauchi. The CYP was higher in Sokoto than Bauchi most strikingly for the following three methods: injectables, implants and oral contraceptives. In comparing the total CYP using DELIVER data from 2011 to 2014, it was apparent that the CYP started higher in Sokoto than Bauchi in 2011. From 2011 to 2013, the CYP increased more in Sokoto than in Bauchi. This trend changed between 2013 and 2014, when Bauchi had a slightly higher CYP than Sokoto for the first time in four years.

Composite data clearly showed that use of family planning methods requiring commodities in public facilities in Bauchi and Sokoto increased from 2009 to 2014. The population of women of reproductive age (WRA) (15-49 years old) likely increased in these states in this time period as well.

To assess whether the apparent increase in commodity contraceptive use increased in tandem with, or in excess of, the population increase, public facility service statistics were compared to population projections in Bauchi and Sokoto. In both states, the commodity increase surpassed the population increase; however, only Sokoto had a higher contraceptive prevalence rate (7%) than what was reported in the household surveys (1%).

In sum, based on the reports, available data and the analyses conducted, use of modern commodity

contraceptives likely increased in Sokoto State – unlike what was reported in the household surveys. The increase in contraceptive use in Bauchi remained at a low level – but the trend data showed some promising findings, notably an increase in use as opposed to a sustained level of use.

If the trend continues, contraceptive use in Bauchi will also exceed the level reported by the household surveys. The questionable quality of the available facility-level data, as well as the number of assumptions necessary to make these comparisons, make these conclusions tentative, however.

Qualitative Findings

Facility observations along with interviews with Health Management Information Systems (HMIS) Officers, family planning providers and current family planning clients provide context for the quantitative findings. In the facilities, daily activities were well-recorded by facility staff, however these daily activities were not often reconciled with the commodity records.

HMIS Officers, family planning providers and family planning clients all reported an increase in family planning acceptance and use at the community level. An increase was also seen in the number of service delivery facilities, trainings, renovations and communication with potential clients. These changes were identified as occurring after the arrival of the Targeted States High Impact Project (TSHIP).

Injectables were the most common method used by women at most facilities – but this preference for injectables was surpassed by a preference for implants at some facilities.

A husband's consent for family planning use was desired by all; however, if women and providers recognized a need for family planning in the absence of consent – they were not opposed to clandestine use in this situation.

Despite the increasing use of family planning, use was still low and seen as a private matter. Whether or not a woman would respond to an interviewer asking questions about her family planning use depended on a variety of factors – types of questions, location of the interview, gender of the interviewer and awareness of the woman's use by others.

Conclusions

Northern Nigerians desire large families. Given this fact and rampant fears of modern contraceptive methods, efforts focused on limiting childbearing will not likely succeed in this context; however, careful efforts focused on child spacing is acceptable.

On the service delivery side, training of providers and task shifting in the intervention areas was very successful. Improvements to be made include fostering programs to ensure more family planning providers are female, increasing routine supervision of family planning facilities and providers, and reducing the frequent transfer of providers.

The household survey findings were more varied, possibly due to survey methodology or data collection efforts. While no apparent increase was observed in private sector commodity use – the opposite was true in public facilities. The increase in use was higher and more rapid in Sokoto as compared with Bauchi – but the latest data suggested the increases in Bauchi were more sustained and catching up to the level in Sokoto.

The likelihood of a woman accurately reporting contraceptive use to an interviewer was low if the interviewer was male and the woman was not open about her family planning use socially.

The coordinated efforts to increase family planning use have been moderately successful in Bauchi and Sokoto - in large part due to the broad focus of these programs on maternal and child health. But a lack of focus on demand creation activities likely has hampered this success.

At this critical juncture of sustained increases in modern contraceptive use – the time is ripe for a strong focus on demand-side activities to promote family planning use at the community, family and individual level.

INTRODUCTION

Bauchi and Sokoto States were selected by USAID Nigeria in 2009 under its Focus States Strategy, which called for significant investments in governance, basic education and health of women and children. With health status in both states being generally poor, there was an urgent need to invest resources to improve coverage of key interventions.

According to the Nigerian 2008 Demographic and Health Surveys (DHS), only 1% of children were fully immunized in both states and a majority (over 80%) of births were being delivered by non-skilled providers. The fertility rate in both states was also above eight children per woman, and the modern contraceptive prevalence rate was 2%. As a result and as part of USAID-funded health activities, efforts to increase access to family planning services for women who desire to space and limit births were implemented.

One of the main projects from this funding stream was the Targeted States High Impact Project (TSHIP), a five-year, USAID-funded project (later extended by an additional year) launched in 2009 to increase the use of high-impact integrated maternal, newborn and child health (MNCH), family planning, and reproductive health interventions to improve the health status and survival of mothers, newborns and children under-five in Bauchi and Sokoto States in Northern Nigeria. The focus of this report is solely on family planning efforts in Bauchi and Sokoto.

Despite substantial funding and targeted interventions, the Nigerian DHS in 2008 and 2013 reported similarly low modern contraceptive prevalence rates. These stagnant findings were unexpected given the financial and technical inputs into these two states in the area of family planning.

The inputs included increasing the number of contraceptive service delivery points, especially in the rural areas, and shifting health worker tasks such as implant insertion to lower-tier providers like community health extension workers (CHEW) in the intervention areas.

The purpose of this report is to better understand contraceptive use in Bauchi and Sokoto States. This report includes:

- A literature review on the family planning context in Northern Nigeria
- An exploration of data available on contraceptive use in Bauchi and Sokoto States – using facility-level consumption data, commodity resupply data and household surveys – in an effort to explain the inconsistency of findings at the household and facility levels in modern contraceptive use
- A qualitative study with HMIS Officers, family planning providers and family planning clients in the two states

This report will detail the main findings from these three complementary studies to assess changes in modern contraceptive use in Bauchi and Sokoto States between 2009 and 2014.

METHODOLOGY

This report includes a literature review, a qualitative study and a quantitative study. The methods section will be disaggregated by study type.

Literature Review

A systematic search of seven databases, 39 gray literature sources and bibliographies of included articles was conducted. Qualitative and quantitative articles published between 2008 and 2014 that explored one or more factors related to family planning in Northern Nigeria were included.

Results from articles were synthesized using a narrative analysis approach. The searches yielded 1,539 unique articles. Titles and abstracts of these articles were screened and 276 articles were selected for full text screening. Of these, 61 articles fit the full text inclusion/exclusion criteria and were assessed for quality. In total, 27 articles were included in the analysis.

Quantitative Study

Multiple sources of data were included in the quantitative analysis: household surveys, facility-level service statistics and commodity supply data. Household survey data, in particular, the 2008 and 2013 Nigeria DHS, were included to assess contraceptive use at the household level.

At the facility level, contraceptive commodity data was included to assess the amount of contraceptive consumption at the family planning facility level. These data came from the JSI/DELIVER project, which was contracted by USAID to support contraceptive commodity supply to public sector facilities in Bauchi and Sokoto States. Data from the Society for Family Health (SFH) was also included to assess contraceptive commodity supply to the private sector in these two states.

Finally, project data from TSHIP was included to match the facilities partnered with the project with the commodity data and overall effect of the project in increasing modern contraceptive use.

Categorizing contraceptive method use was commonly used in this study. Three main distinctions were utilized: contraception, modern contraception and commodity contraception. In this study, contraception applied to any method used to space or limit childbearing. The following methods fall under the modern contraception category: the IUD, implants, injectables, oral contraceptives, female condoms, male condoms, diaphragms, female sterilization, male sterilization, lactational amenorrhea, foam/jelly and other modern methods.

Finally, the commodity contraception category was particularly useful in this analysis to more directly compare facility-level data and household survey data. The following contraceptive methods were in the commodity contraception category: the IUD, implants, injectables, oral contraceptives, female condoms and male condoms.

With the household survey data, those collected nationally and in the target states, the main focus of this analysis was on the current use of contraception, disaggregated by gender where possible.

With the facility-level data, the first step of analysis involved examining the data quality, merging the data sets within the data source, tabulating the results and comparing results between states and data

sources.

The TSHIP program first began in Bauchi and then expanded to Sokoto. Data on the family planning aspects of the TSHIP and DELIVER programs were available beginning in 2009 for Bauchi and in 2011 for Sokoto.

Bauchi DELIVER data were available from January 2009 until December 2014 – except implant data was first reported in July 2011. Sokoto DELIVER data were available first in January 2011 through December 2014, except, as with the Bauchi data, implant use was first reported in July 2011. The DELIVER data from both states was based on the bimonthly reporting system until 2013/2014.

In July 2013, DELIVER added a truck commodity delivery system, called DDIC (Direct Delivery and Information Capture), in addition to the bimonthly reporting system in Bauchi. The same system was added in March 2014 in Sokoto. The TSHIP Bauchi and Sokoto data on all commodity methods were available from January 2011 through December 2014 (see figure below).

In some data sets, the type of method, such as injectables, was not delineated. In these instances the shortest factor was used for CYP calculation on the full sample.

Qualitative Study

This qualitative methods used in this study were in-depth interviews (IDIs) and facility-level observations. Study participants included Health Management Information System officers (HMIS), family planning providers and family planning users. A total of eight facility observations and 56 individual in-depth interviews were conducted in Bauchi and Sokoto States.

NVivo software was utilized for qualitative data analysis. The data analysis steps included:

1. **Familiarization**: reading the collected data, summarizing interviews, identifying key themes and recurring issues
2. **Identifying themes**: developing a coding system for the data per segment of the research
3. **Indexing**: developing lists of all the categories to be used in the analysis
4. **Charting**: in the project file in NVivo, the researcher created and explored documents and themes
5. **Mapping and interpretation**: looking at patterns across the charts and notes made during the development of the thematic framework

LITERATURE REVIEW RESULTS

Of the 27 articles published between 2008 and 2014 included in the literature review, 20 articles examined family planning in the North-West zone of Nigeria and 10 in North-East zone (note: some studies covered both zones). Within the North-West zone, most study populations were from Kaduna State.

Within the North-East zone, six of the 10 studies included populations within Borno State. Of the 27 included studies, nine were qualitative, 16 were quantitative and two used mixed methods. Studies covered a range of family planning outcomes. Findings from all included studies were categorized by topic and three main themes emerged: fertility preferences; family planning knowledge, attitudes, and behavior; and family planning service delivery.

Fertility Preferences

Fertility preferences refer to an individual's (or couple's) desired level of fertility and opinions regarding past and future births. This section included studies that ask individuals (or couples) about their desire for more children; desire to limit childbearing; ideal number of children; thoughts on child spacing; and wanted, unwanted, and mistimed pregnancies. Understanding fertility preferences was one way to assess an individual's (or couple's) need for contraception.

Nine of the included studies assessed fertility preferences in Northern Nigeria, all were qualitative. Collectively, these studies assessed how many children Northern Nigerians desire and explored the factors driving fertility preferences in this region.

The studies found that males and females in Northern Nigeria desire large families due to multiple factors ranging from religious beliefs to economic security. Due to the high value placed on children, most studies found limiting childbearing to be a controversial, or disliked practice, while child spacing was generally accepted. Though large families were the norm in this region, studies found that women tend to want fewer children than men, but were often unable to successfully limit or space children due to gender dynamics within relationships.

Family Planning Knowledge, Attitudes, and Behavior

Family planning was defined as "a conscious effort by a couple to limit or space the number of children they want to have through the use of contraceptive methods." This section included studies on knowledge of contraceptive methods, including sources of information and misconceptions about contraception. Also included are articles about attitudes toward contraception as well as current and past use of contraception.

Eighteen articles assessed some aspect of family planning knowledge, attitudes or behavior. These studies found that around 60% of study participants knew of modern contraceptive methods and that males and females got their information about contraception from different sources.

Misconceptions about contraception were abundant. Misinformation about contraception created a fearful and skeptical attitude toward contraception. Fears also prevented couples from discussing

contraceptive use within the relationship, which sometimes led to covert use of contraception by women within marriages. Contraceptive use was low in Northern Nigeria and varied by multiple socio-demographic variables, such as age, education, religion, marital status and parity, and also by method type.

Family Planning Service Delivery

The family planning services sector in Nigeria included public health facilities (government-run hospitals, primary health centers), private hospitals and clinics, patent medical vendors (PMV) and pharmacies.

Studies on family planning service delivery covered topics such as patterns in service delivery, a service provider's cultural and religious attitudes about contraceptives, and limitations in consistent supply of contraceptive commodities. Eleven studies covered some aspect of family planning service delivery. The major findings with regard to service delivery were

- Community-based distribution of injectable contraceptives is feasible
- Family planning providers with more training have more accurate knowledge and positive attitudes about modern contraception than those with less training
- Limited hours of operation as well as limited stock of contraceptives prevent Northern Nigerians from accessing contraception

National Household Surveys

Nigeria Demographic and Health Survey 2008 and 2013

DHS data have been collected in Nigeria since 1990 – at an interval of every five years since 2003. For the purposes of this study, the focus was on contraceptive use as reported in the 2008 and 2013 Nigerian DHS.

No change was reported in contraceptive prevalence rates in Bauchi when comparing 2008 and 2013 data. The modern contraceptive prevalence rate in Bauchi in 2008 was 1.93% [95% confidence interval: 0.58-3.28] while it was 1.94% [0.90-2.98] in 2013. The commodity contraceptive prevalence rate was 1.63% [0.31-2.95] in 2008 and 1.88% [0.83-2.92] in 2013.

In Sokoto, the modern contraceptive prevalence rate in 2013, 0.63% [0.21-1.05] declined from the rate reported in 2008, 1.90% [0.89-2.92]. No change was seen in the commodity contraceptive prevalence rate in between 2008, 0.74% [0.20-1.28] and 2013, 0.49% [0.03-0.96].

Nigeria DHS Data Analysis
*weighted analysis

NDHS 2008	Unweighted	Weighted	Point Estimate	95% Confidence Interval	
Modern CPR	n	n	%	LL	UL
Bauchi	1008	998	1.93	0.58	3.28
Sokoto	945	822	1.90	0.89	2.92
Commodity CPR					
Bauchi	1008	998	1.63	0.31	2.95
Sokoto	945	822	0.74	0.20	1.28
NDHS 2013					
Modern CPR					
Bauchi	1196	1161	1.94	0.90	2.98
Sokoto	1314	1098	0.63	0.21	1.05
Commodity CPR					
Bauchi	1196	1161	1.88	0.83	2.92
Sokoto	1314	1098	0.49	0.03	0.96

SMART 2014 Survey

Data for the Nigerian National Nutrition and Health Survey were collected using the Standardized Monitoring and Assessment of Relief and Transitions survey methodology from February to May 2014. This survey was a two-stage cluster sample designed to be representative at the state level. There were 25,567 households included in the sample and 23,942 women. The table that follows shows the

reported current contraceptive use by state. Modern contraceptive use in Bauchi is 8.0% [4.9-12.8] and 0.7% [0.2-2.1] in Sokoto State. Traditional method use is reported as zero in Sokoto. In Bauchi, the low reported traditional method use, 0.7%, is the same as the modern method use in Sokoto, 0.7%.

SMART 2014 Survey on Current Contraceptive Use

	Bauchi (n=688)			Sokoto (n=595)		
	Point Estimate	95% Confidence Interval		Point Estimate	95% Confidence Interval	
	%	LL	UL	%	LL	UL
Modern Method	8.0	4.9	12.8	0.7	0.2	2.1
Traditional Method	0.7	0.3	2.0	0.0	0.0	0.0
Any Method	8.7	5.5	13.5	0.7	0.2	2.1

Multiple Indicator Cluster Survey 2011

The 2011 Multiple Indicator Cluster Survey (MICS) in Nigeria selected 40 census enumeration areas systematically with equal probability in each state. All households in each selected enumeration area were listed. From this list, 20 households were selected and systematically sampled. The total sample in this survey was 29,077 women.

The table that follows shows reported current contraceptive use by state. Modern contraceptive use in Bauchi was 2.3% and 1.4% in Sokoto State. Traditional method use was more common in both states than modern method use. Among the modern methods, injectables were the most commonly used in both states – followed by oral contraceptives. While there was no IUD or implant use in Bauchi, there was 0.1% reported use of both in Sokoto.

MICS 2011 Survey

	Bauchi (n=843)	Sokoto (n=703)
No Use	95.2	96.2
Any method	4.8	3.8
Any modern	2.3	1.4
Any traditional	2.5	2.4
IUD	0.0	0.1
Implant	0.0	0.1
Injectable	1.4	0.7
Oral contraceptives	0.7	0.4
Male Condom	0.1	0.2
LAM	0.4	0.0
Periodic abstinence	0.1	0.2
Withdrawal	0.3	1.8
Other	1.6	0.5

National HIV/AIDS and Reproductive Health Survey Plus II, 2012

The National HIV/AIDS and Reproductive Health Survey (NARHS) utilized a four-level multi-stage cluster sampling procedure. In stage one, rural and urban localities were selected and in stage two, enumeration areas within the selected rural and urban localities occurred. All households in the enumeration areas were listed and then individuals were selected within those lists for interviews and testing. A total of 31,235 individuals were included in the interview portion of the study.

Details on current contraceptive method use were noted for Bauchi and Sokoto States in the table below. In Bauchi, any and modern contraceptive method use was the same, while commodity use was slightly lower for males only, 3.41% [1.58-5.24].

NARHS 2012 Family Planning Data
*unweighted data

	Bauchi				Sokoto			
	n	Percent	95% CI LL	95% CI UL	n	Percent	95% CI LL	95% CI UL
Any Method Use								
Female	382	3.14	1.38	4.90	432	4.63	2.64	6.62
Male	381	3.67	1.78	5.57	463	4.75	2.81	6.70
Total	763	3.41	2.12	4.70	895	4.69	3.30	6.08
Modern Method Use								
Female	382	3.14	1.38	4.90	432	1.85	0.58	3.13
Male	381	3.67	1.78	5.57	463	2.59	1.14	4.04
Total	763	3.41	2.12	4.70	895	2.23	1.26	3.20
Commodity Method Use								
Female	382	3.14	1.38	4.90	432	1.85	0.58	3.13
Male	381	3.41	1.58	5.24	463	2.59	1.14	4.04
Total	763	3.28	2.01	4.54	895	2.23	1.26	3.20

Bauchi and Sokoto State Household Representative Survey

Lot Quality Assurance Survey 2012

The Lot Quality Assurance Survey (LQAS) was conducted by TSHIP in 2012. Special efforts were made during the research assistant recruitment process: "The main criteria for selection to participate in the survey as a research assistant were that the applicant came from the state where the survey was conducted and spoke the local dialect. This was to facilitate communication with respondents during the data collection process."

Through the data collection process: "Data collection started with identification of the community leader – the *Miangwa* – who helped in sampling the initial household and allocated a guide responsible for moving along with and introducing the interviewers to the selected households during the exercise."

Interestingly, all interviewers were female while all supervisors were male. The sample included both males and females and was restricted to women who had delivered less than two years prior to the survey and men who had at least one child under five years of age.

In this survey, 19 zones within each local government area (LGA) were identified for sample selection. One male and one female meeting the inclusion criteria were then interviewed in each zone. The sampling took place in November and December of 2012.

As reported by the TSHIP LQAS 2012 survey, 32% and 29% of surveyed individuals, in Bauchi and Sokoto, respectively, reported having been counseled on family planning. This figure differed minimally for male and female respondents. Modern contraceptive use was measured at 11.1% in Bauchi and 9.3% in Sokoto. In both states the reported modern contraceptive use by males was double that of females. The most commonly used methods in both states were injectables and oral contraceptives.

LQAS 2012

	Bauchi			Sokoto		
	Total	Male	Female	Total	Male	Female
	(n=760)	(n=380)	(n=380)	(n=874)	(n=437)	(n=437)
Any counseling on FP	32.2%	31.1%	33.4%	28.7%	29.3%	28.1%
Modern method use	11.1%	15.3%	6.8%	9.3%	11.7%	6.9%
Injectables	42%			42%		
Oral Contraceptives	26%			42%		
Other	13%			16%		

In the LQAS questionnaire, respondents who were not using a modern method of family planning were asked why they did not use family planning. The majority of responses, in both states, was a lack of knowledge about family planning (67-70%). The second most common response was mistrust or a fear of side effects (12-16%). Finally, between 8% and 9% of respondents in both states indicated reasons such as methods being unavailable or unaffordable and lack of spousal support to use family planning.

LQAS 2012

	Bauchi	Sokoto
	(n=676)	(n=782)
Reasons for Nonuse		
Lack of knowledge	70%	67%
Mistrust/Fear of side effects	12%	16%
Not available/Not affordable	9%	8%
Lack of spousal support	9%	9%

Household Survey Findings Summary

To more easily compare the various household survey results, the modern and commodity (where available) contraceptive prevalence as reported by the female samples were recorded in the table that follows. The modern and commodity contraceptive prevalence were reported as between 2% and 3% for all surveys in Bauchi from 2008 to 2014 except for the LQAS in 2012 (7%) and the SMART 2014 survey (8%). In Sokoto from 2008 to 2014, all surveys reported a modern or commodity contraceptive prevalence rate as between 0.6 and 2%, except the 2012 LQAS survey (7%). For most surveys, except the LQAS 2012, the contraceptive prevalence rate reported in Bauchi exceeded that of Sokoto.

Household Survey Findings Comparison

| Modern CPR	Bauchi	Sokoto
NDHS 2008	1.93	1.90
MICS 2011	2.30	1.40
NARHS 2012	3.14	1.85
LQAS 2012	6.80	6.90
NDHS 2013	1.94	0.60
SMART 2014	8.00	0.70
Commodity CPR		
NDHS 2008	1.63	0.74
NARHS 2012	3.14	1.85
NDHS 2013	1.88	0.49

Facility-Level Data

### Society for Family Health – Private Sector Commodities

Society for Family Health (SFH) provides all private sector contraceptive commodities in Bauchi and Sokoto States. Data on private sector commodities for the two states in 2012 and 2013 are included in the analysis, as are data from January – July 2014.

The 2013 data in CYP equivalents shown here were an example of the common patterns seen in each year of the SFH data. The provision of male condoms, injectables and oral contraceptives in the private sector in both states exceeded that of other methods.

**Bauchi Private Sector Commodities in CYP Equivalents, SFH 2013**
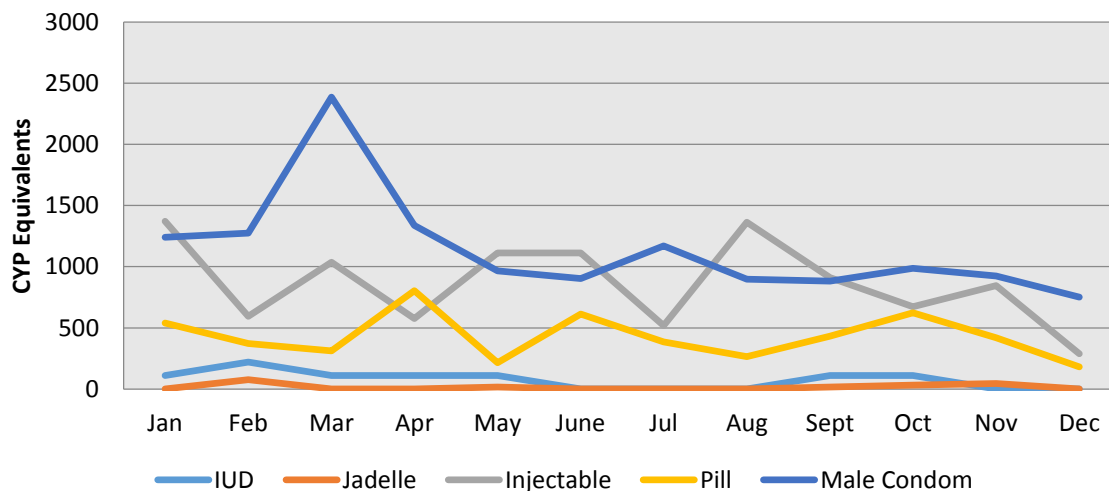
Sokoto Private Sector Commodities in CYP Equivalents, SFH 2013
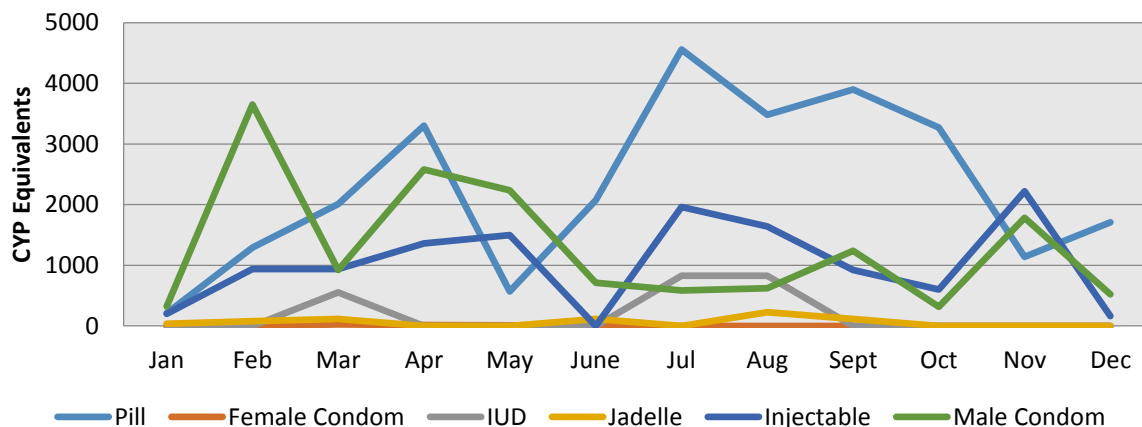
The graph below compared the total commodities provided by SFH to Bauchi and Sokoto from January 2012 to July 2014 in terms of CYP equivalents. The CYP equivalents of total commodities provided to Sokoto exceeded that provided to Bauchi by nearly 2.5 times.

In Bauchi, 52% of the total CYP equivalents were due to male condoms; in Sokoto, it was 32% of the total. Oral contraceptives accounted for 42% of the total commodity CYP equivalents in Sokoto, compared with 18% in Bauchi, and injectables accounted for 19% of the total CYP equivalent in Sokoto compared with 26% in Bauchi.

Bauchi and Sokoto SFH Total Overall and Male Condom Commodities by CYP equivalent, 2012-2014
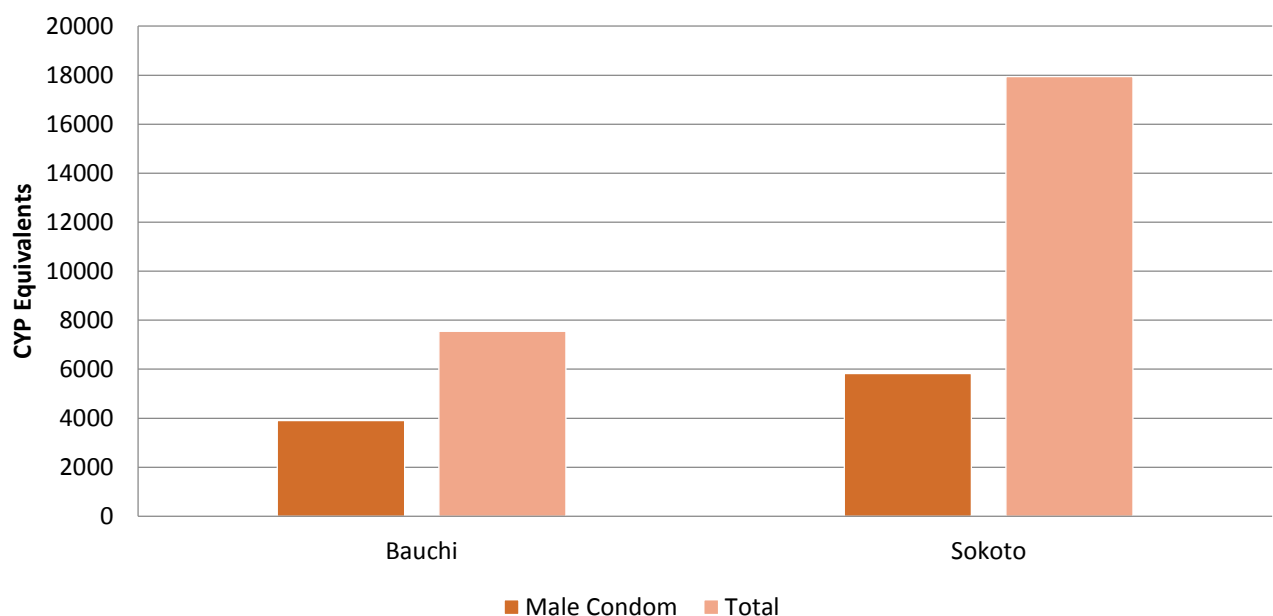
Number of Family Planning Facilities in DELIVER and TSHIP Databases

Bauchi

An analysis of the Bauchi DELIVER data set on family planning service delivery points showed the number of delivery points each year, from 2009 to 2014.

Bauchi							DDIC
DELIVER Data Source	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2014**
Number of LGAs with Facility Level Data	18	20	20	20	20	20	19
Number of Facilities	129	169	303	362	437	270	310
Range of Facilities within LGA	0-15	4-16	10-23	11-32	13-41	6-23	4-18
Average Number of Facilities per LGA	7.17	8.45	15.15	18.1	21.85	13.5	8.2

All of the LGAs in the Bauchi DELIVER data set were represented all years except for 2 LGAs in the first year of data. The total number of facilities increased each year from 2009 to 2014. A total of 1,101 recognized family planning facilities were located in Bauchi; therefore, by 2014 these data represented approximately half of the total number of family planning facilities in Bauchi State.

It was important to note here that if a facility contributed data at only one time point in the year, they were included in these figures.

Some facilities reported on use inconsistently throughout the year, others just at one bimonthly time point. In addition, in 2014, the facilities reported in the two columns were mutually exclusive. If a site was part of the DDIC commodity provision service they did not also attend the bimonthly meetings.

Sokoto

The Sokoto DELIVER data set on family planning service delivery points began in 2011 and ended in 2014. Two different data sources contributed to the 2014 data – the bimonthly reporting meetings and DDIC. All 23 LGAs were represented in the DELIVER Sokoto database. A total of 727 recognized family planning facilities were located in Sokoto; therefore, these data represented around 70-80% of the family planning facilities in Sokoto State.

Sokoto					DDIC
DELIVER Data Source	**2011**	**2012**	**2013**	**2014**	**2014**
Number of LGAs with Facility Level Data	23	23	23	20	23
Number of Facilities	465	535	529	237	337
Range of Facilities within LGA	7-35	10-42	10-36	2-26	11-15
Average Number of Facilities per LGA	20.22	23.26	23.00	10.86	14.62

TSHIP Data Source	2011	2012	2013	2014
Number of LGAs with Facility Level Data	8	23	23	23
Number of Facilities	102	564	594	746
Range of Facilities within LGA	1-27	13-41	13-41	16-52
Average Number of Facilities per LGA	12.75	24.52	25.83	32.43

According to the TSHIP data from Sokoto, the number of LGAs with facility-level data, the total number of facilities in the data set, the range of facilities within LGA and the average number of facilities all increased dramatically between 2011 and 2012. The increase was sustained from 2012 to 2013, and increased dramatically again in 2014. The number of facilities in the data set increased seven-fold from 2011 to 2014.

There were more facilities in the TSHIP data set at every time point as compared with the DELIVER data set, except in 2011. It will be important to keep in mind the differences in facility coverage between the two Sokoto data sets when comparing other data from both.

Bauchi DELIVER Commodity Consumption Findings

DELIVER data collection began in Bauchi in 2009 using a bimonthly facility representative meeting and reporting system. From July 2013 until the end of 2014, DELIVER added a truck delivery system to provide commodities called DDIC.

The graph below demonstrated the CYP from the bimonthly system from 2009 to 2014, and the added CYP to the total CYP by the DDIC system in 2013 and 2014. CYP increased slowly from 2009 to 2011. The increase in CYP from 2011 to 2012 was more substantial – and the increase continued through 2014.

The DDIC contribution to the CYP was lower than the bimonthly meeting contribution in 2013 – but that relationship reversed in 2014 with the DDIC playing a larger role in CYP than the bimonthly meetings in 2014. The majority of the CYP was driven by the DDIC system by 2014.

## Bauchi CYP with Bimonthly and DDIC Data, 2009-2014
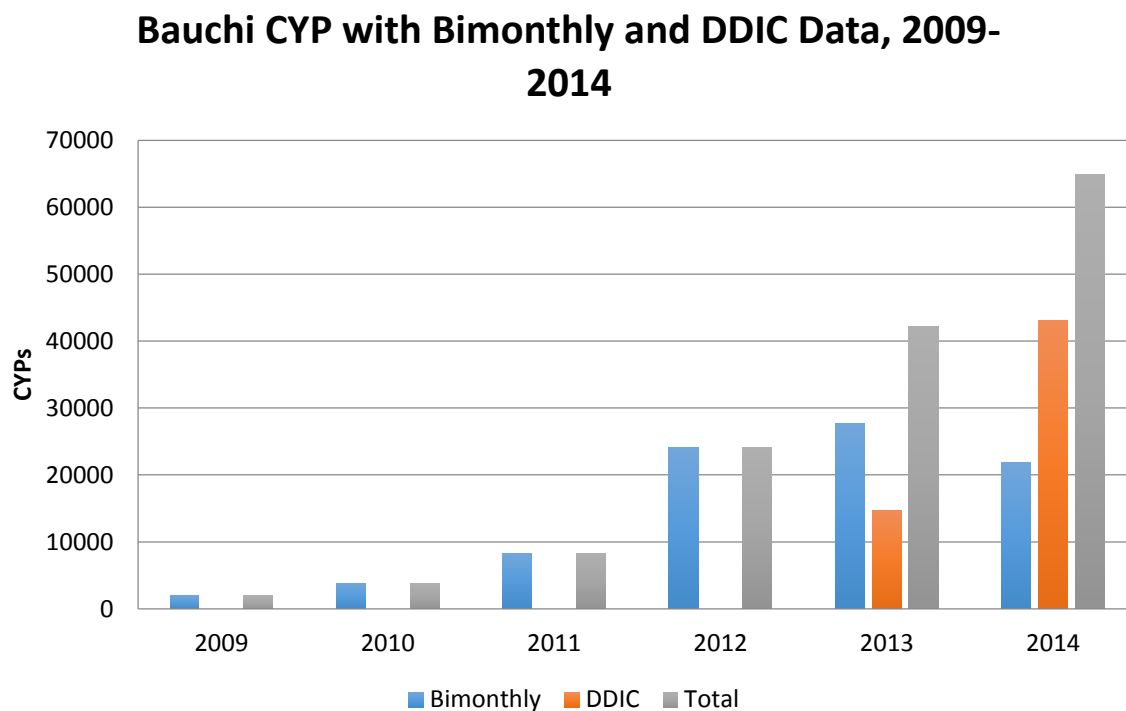
When using DELIVER data from 2009 to 2014 to look at contraceptive method use in Bauchi State, both without and with DDIC data, it was apparent that, on average, the highest volume of use during this time period was among male condoms, injectables and oral contraceptives. When compared with the other three methods, use of the IUD, implants and female condoms was very low.

Bauchi Contraceptive Commodity Consumption
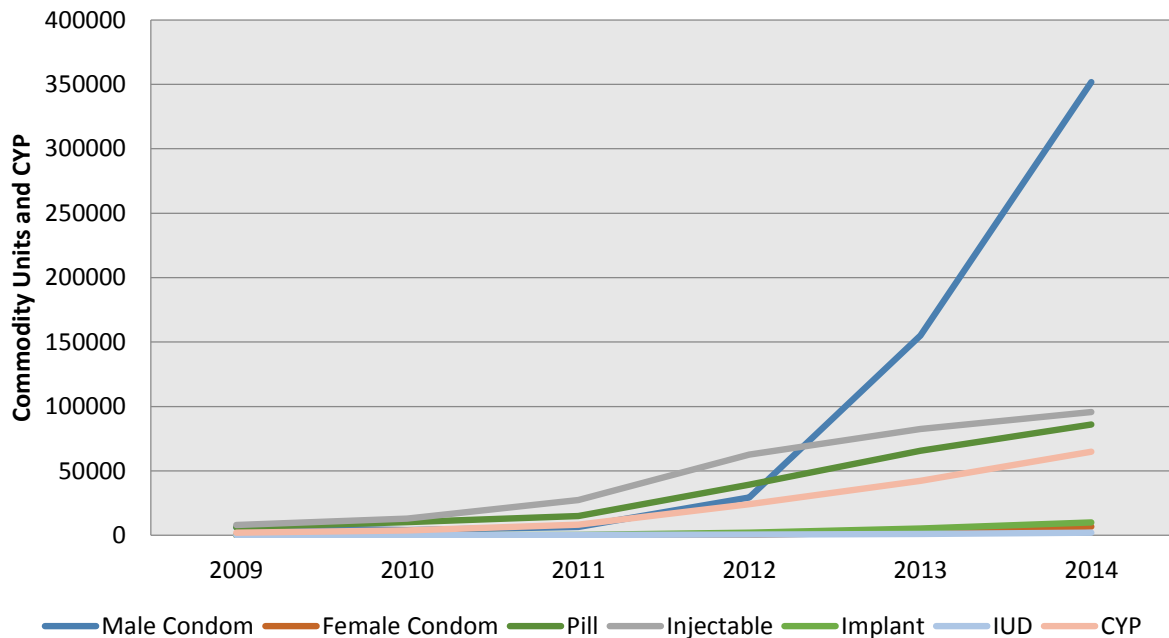## without DDIC Data, DELIVER 2009-2014
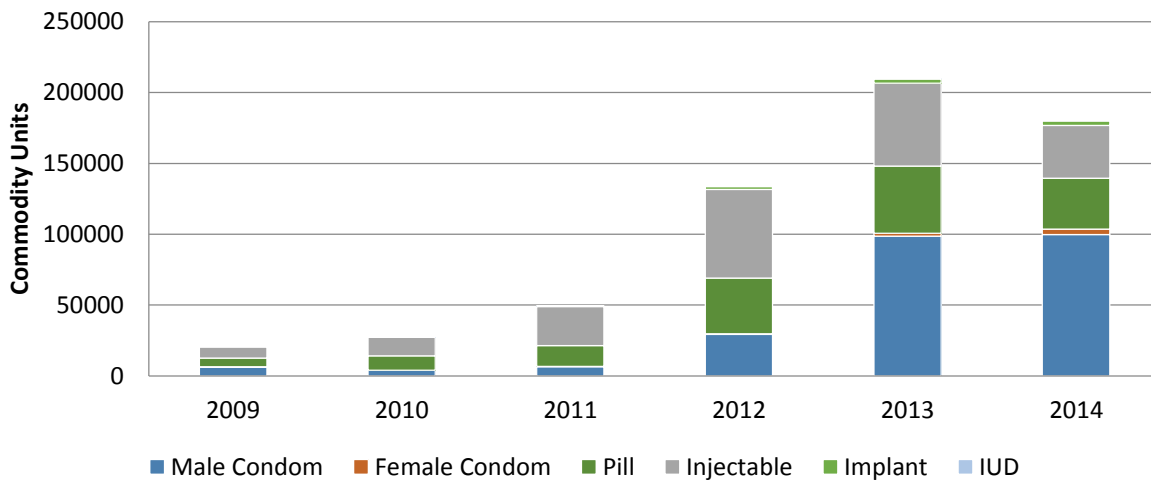
When examining the data over time, use in general was low during the program start-up period of 2009-2010 – although there was a slight increase in injectable and oral contraceptive use. Between 2010 and 2011, use of oral contraceptives and condoms increased slightly while the increase in injectable use was more pronounced. Steady increases occurred from 2012 – 2014 in most methods, and male condom use increased dramatically.
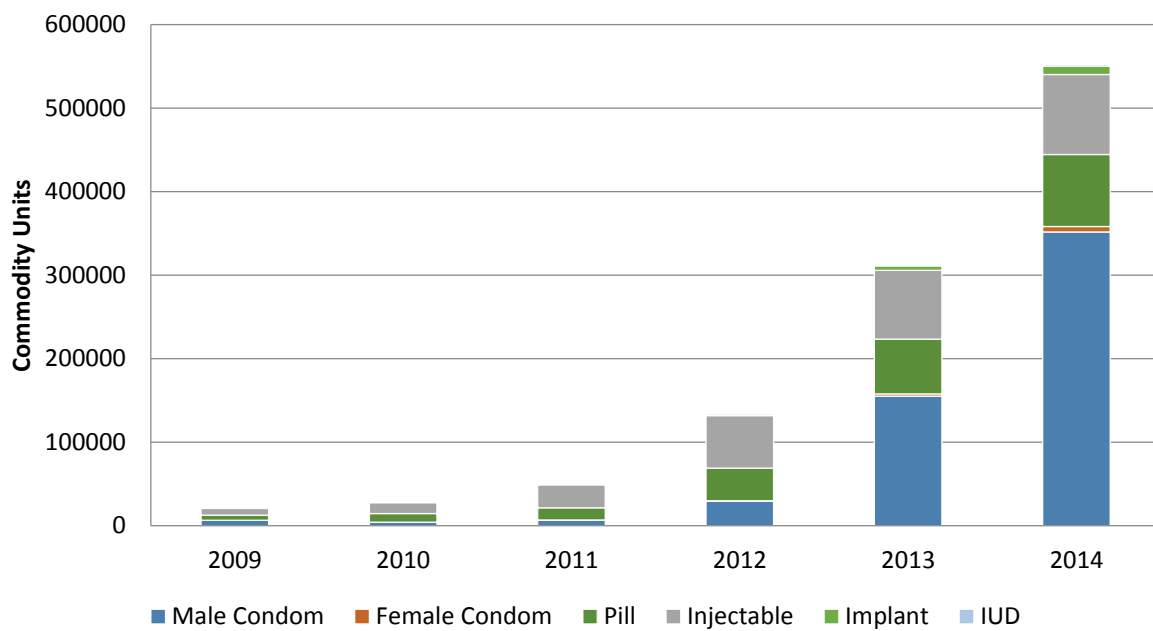
Bauchi Contraceptive Commodity Consumption
without DDIC Data, DELIVER 2009-2014
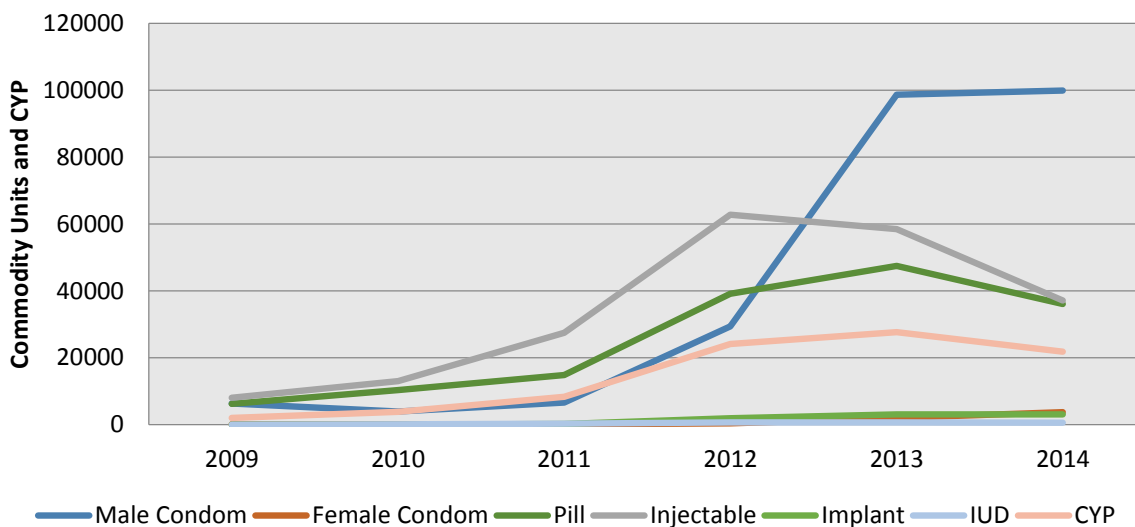
Bauchi Contraceptive Commodity Consumption with DDIC Data, DELIVER 2009-2014
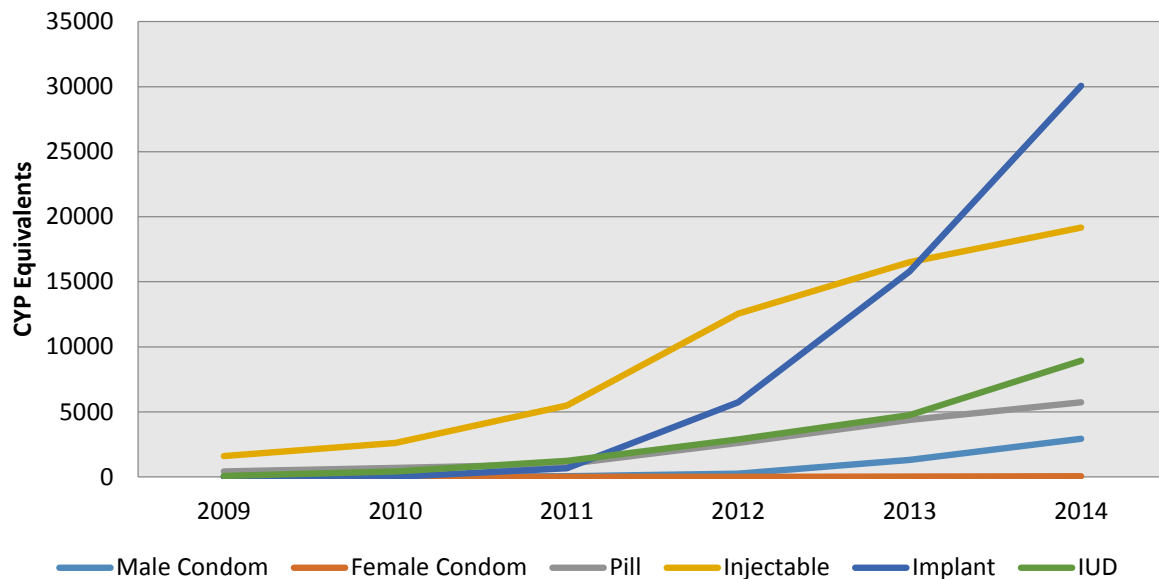

## Bauchi Contraceptive Commodity Consumption with DDIC Data, DELIVER 2009-2014

When examining the data in terms of CYP equivalents, injectables and implants emerged as the main methods contributing to CYP – with implants surpassing injectables in 2013. The IUD, oral contraceptives and male condoms continued to increase through 2014, however, more modestly than implants and injectables.

Bauchi Contraceptive Commodity Use with DDIC Data in CYP Equivalents, DELIVER 2009-2014

Bauchi Contraceptive Commodity Use with DDIC Data in CYP Equivalents, DELIVER 2009-2014
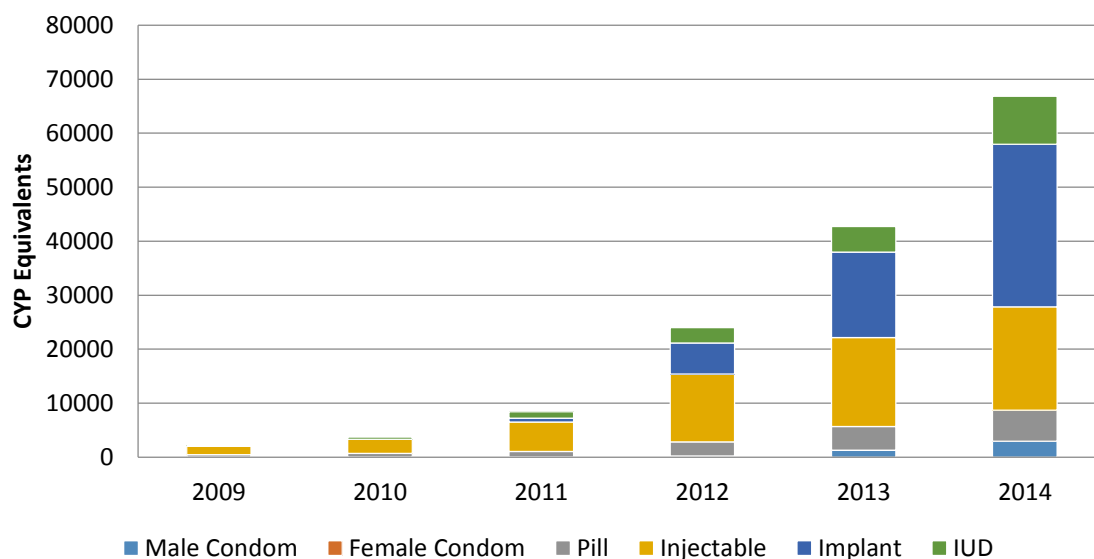
Sokoto DELIVER Commodity Consumption Findings

DELIVER data collection began in Sokoto in 2011 using a bimonthly facility representative meeting and reporting system. Between March 2014 and December 2014, DELIVER added a truck delivery system of commodity provision, called DDIC.

The graph below demonstrates the CYP from the bimonthly system from 2011 to 2014, and the added CYP to the total CYP by the DDIC system in 2014. The majority of the CYP is driven by the DDIC system in 2014 and yet the overall CYP doesn't reach the peak level reached in 2013 – even with the addition of the DDIC system.

## Sokoto CYP with Bimonthly and DDIC Data
2011-2014
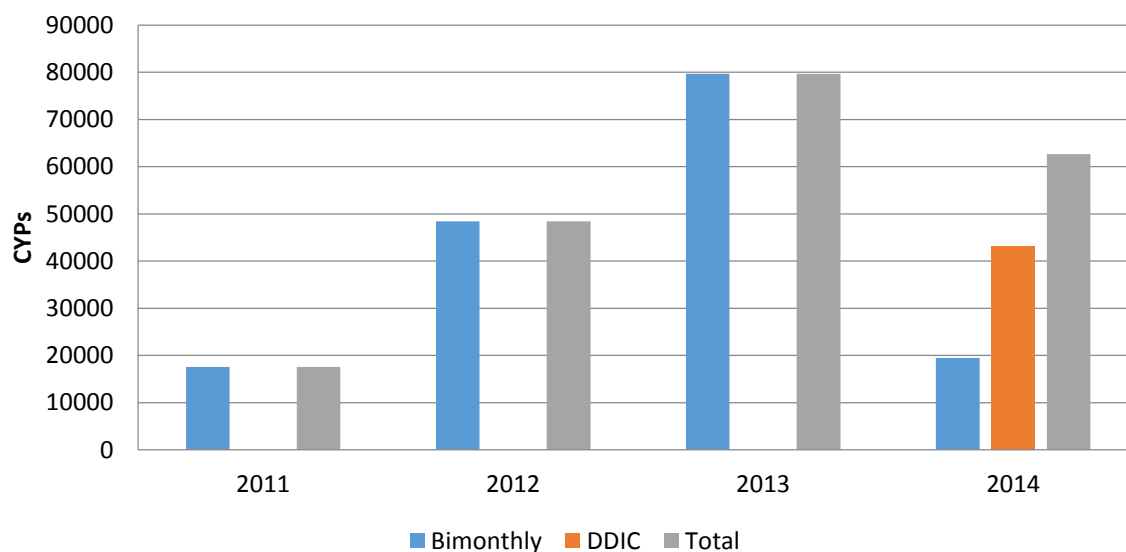
The first two graphs provide the bimonthly data only, which was reported in the first version of this report. The following graphs included the DDIC data.

Use of all methods, especially injectables and oral contraceptives, increased significantly between 2011 and 2012. The trend continued, albeit a bit slower for injectables and oral contraceptives between 2012 and 2013. Consumption of male condoms continued to increase through 2014, while oral contraceptives and injectable consumption remained stable.
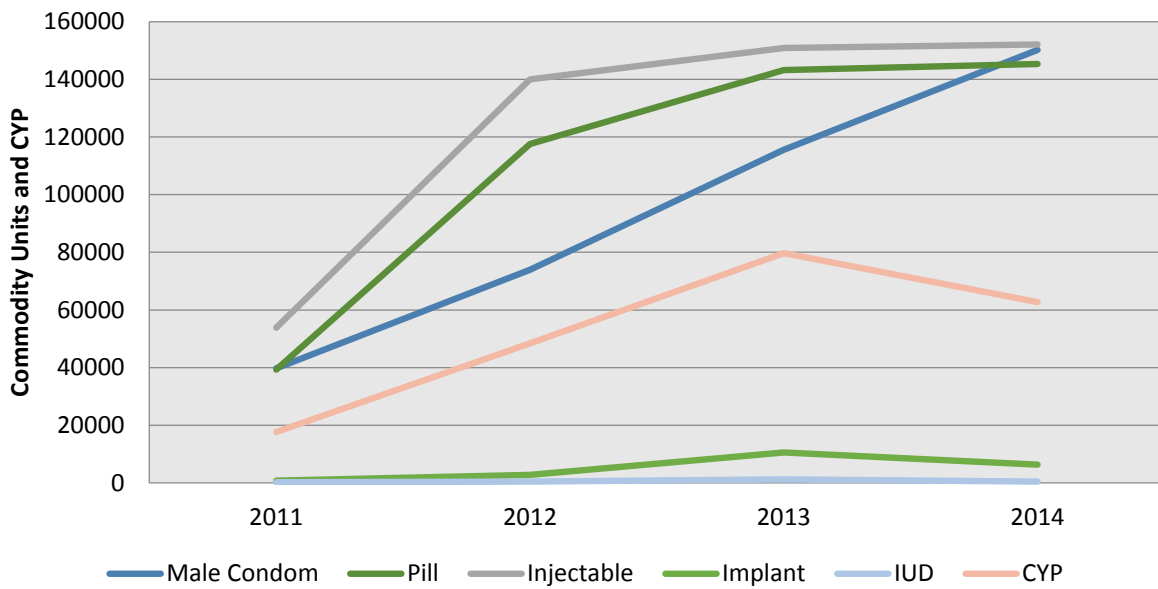
Sokoto Commodity Contraceptive Use without DDIC Data, DELIVER 2011-2014
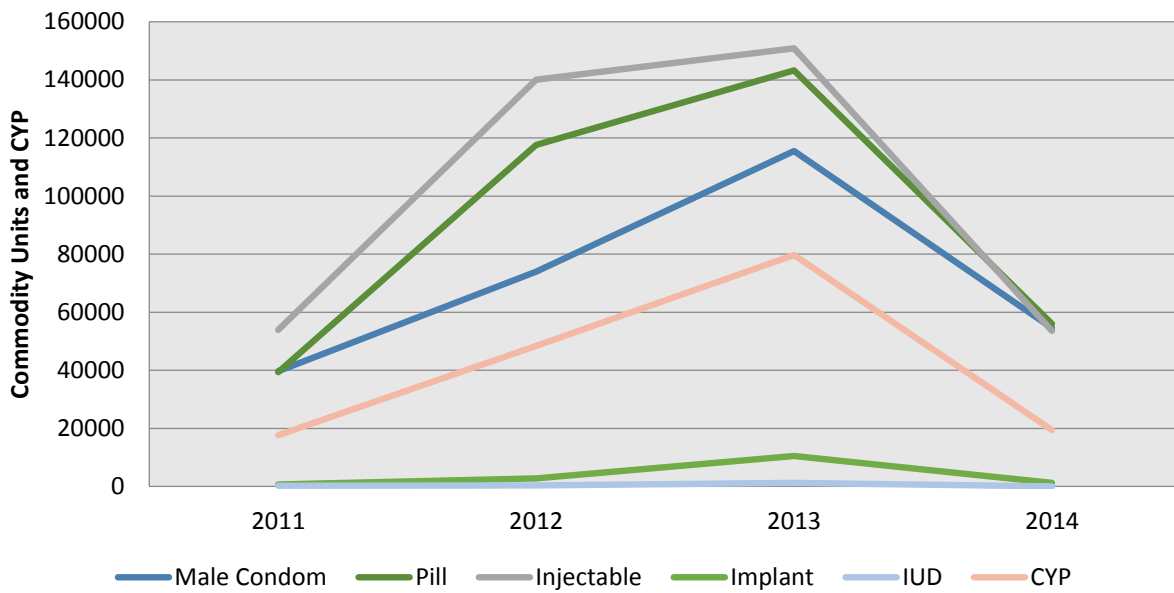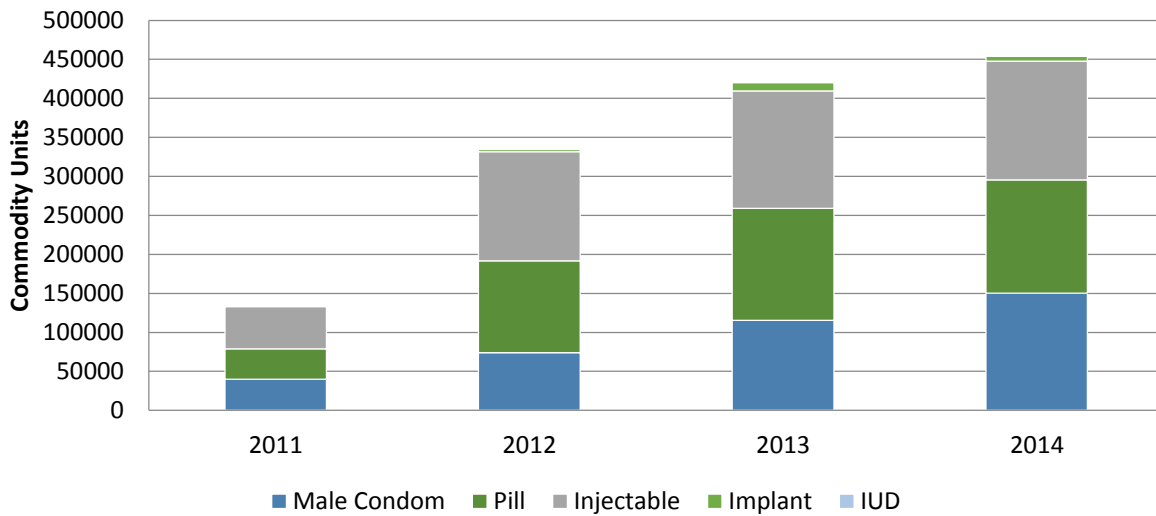

Sokoto Commodity Contraceptive Use without DDIC Data, DELIVER 2011-2014
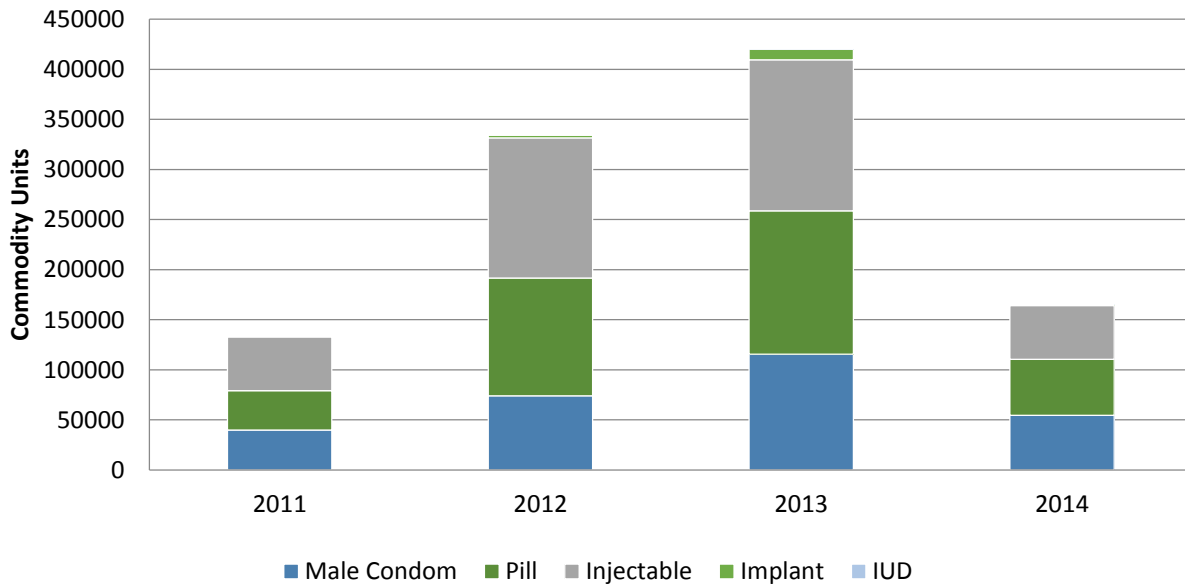
Sokoto Commodity Contraceptive Use with DDIC Data, DELIVER 2011-2014

Sokoto Commodity Contraceptive Use with DDIC Data, DELIVER 2011-2014

When examining the data by CYP equivalents – it was clear that injectables use increased most dramatically between 2011 and 2012, and continued to increase between 2012 and 2014, but at a slower pace. The same pattern was observed for oral contraceptive use. Implant use increased dramatically between 2012 and 2013 but fell to a lower level in 2014. IUD use followed a similar pattern as implants, increasing the most in 2013, but at a lower level.

Sokoto Contraceptive Commodity Use with DDIC Data in CYP Equivalents, DELIVER 2011-2014
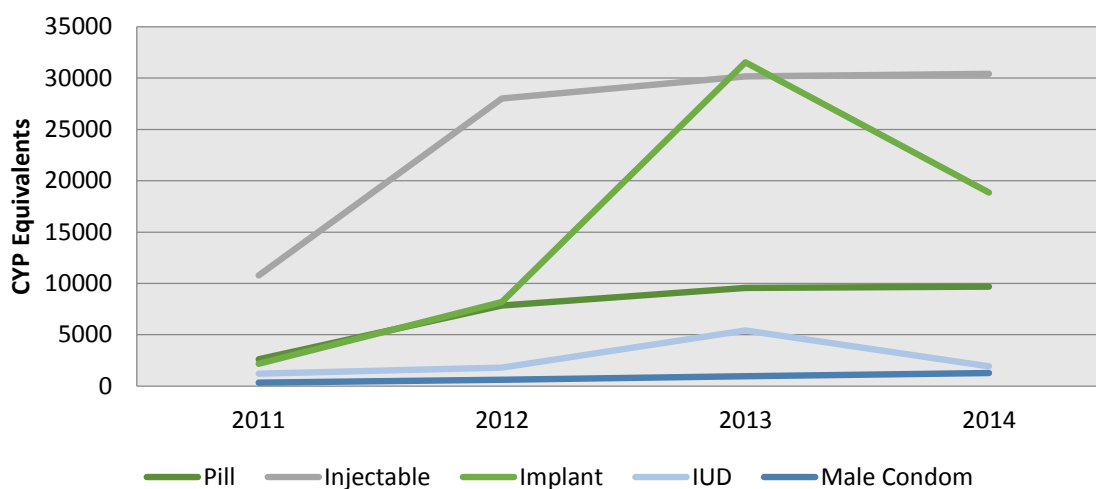
Sokoto Contraceptive Commodity Use with DDIC Data in CYP Equivalents, DELIVER 2011-2014
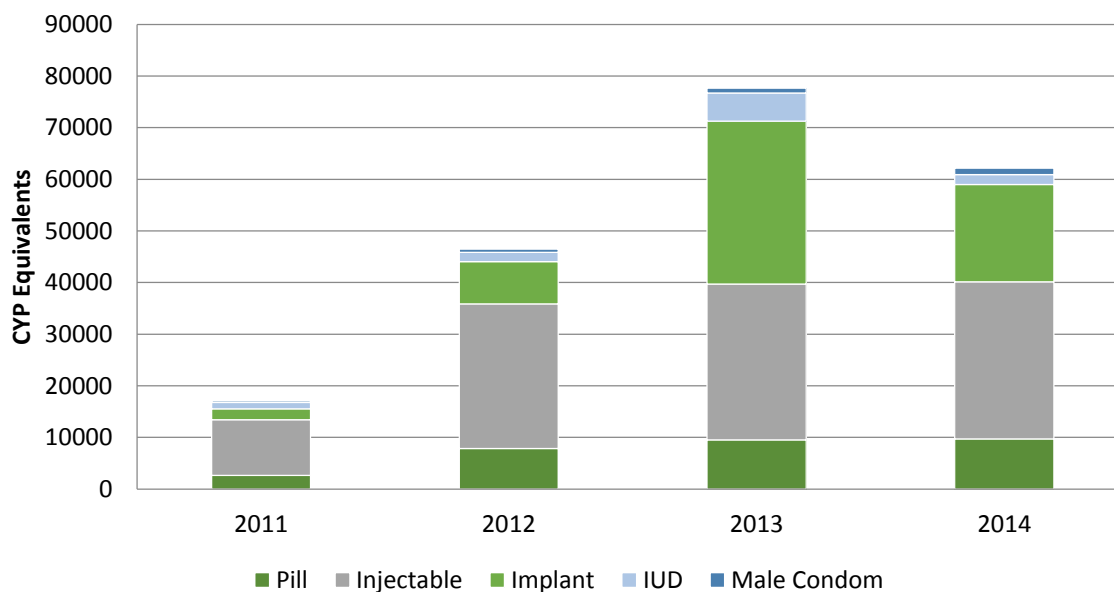
Bauchi and Sokoto DELIVER Data Comparison

The total CYP for every method, except IUD and condoms, is higher in Sokoto than in Bauchi. The CYP is higher in Sokoto than Bauchi most strikingly for the following three methods: injectables, implants and oral contraceptives. It should be noted that these data included more time for CYP to generate, 2009 to 2014, for Bauchi than in Sokoto, 2011-2014.

Bauchi (2009-2014) and Sokoto (2011-2014) Total CYP
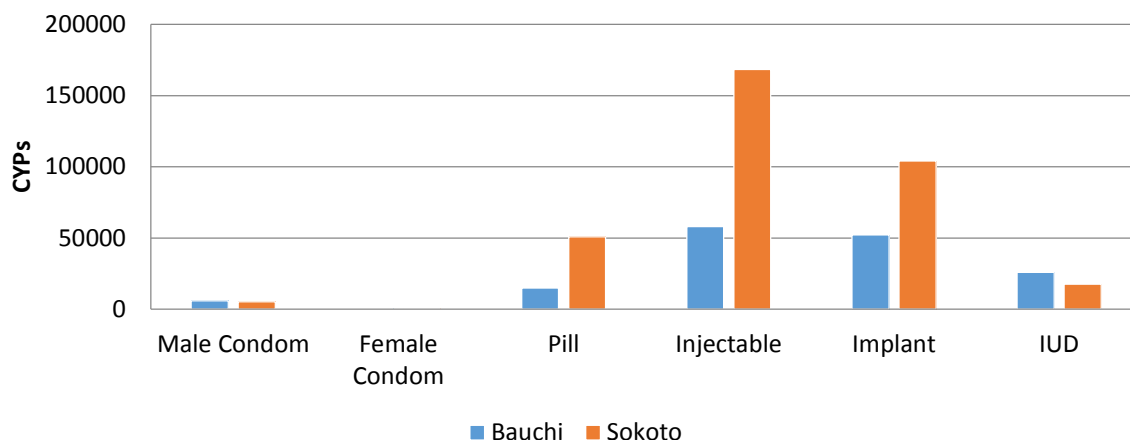
In comparing the total CYP using DELIVER data from 2011 to 2014, it was apparent that the CYP started higher in Sokoto than Bauchi in 2011. From 2011 to 2013 the CYP increased more in Sokoto than in Bauchi. This trend changed in between 2013 and 2014 where Bauchi had a slightly higher CYP than Sokoto for the first time in four years.

Bauchi and Sokoto CYP, DELIVER Data 2011-2014
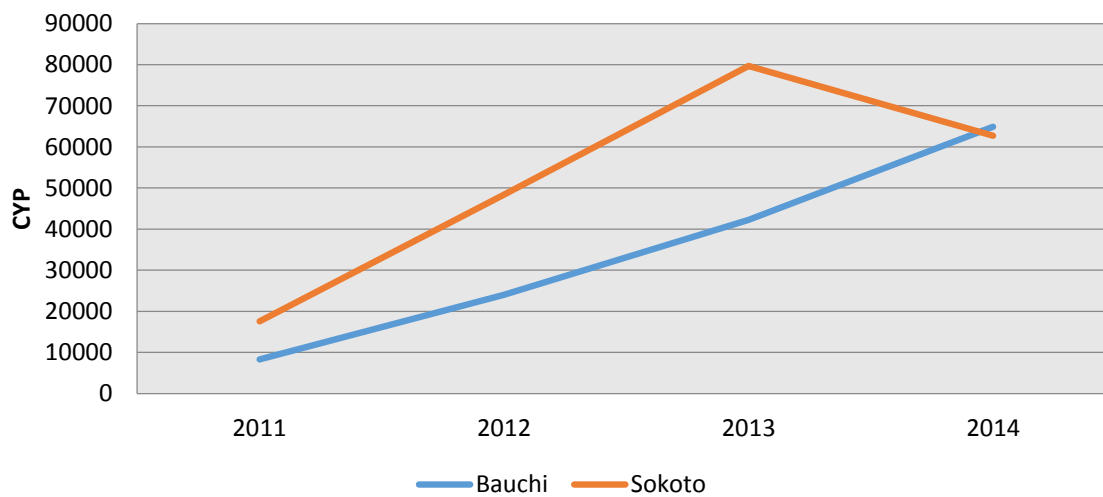
Comparing TSHIP and DELIVER Data Sources

Sokoto

When comparing TSHIP and DELIVER in Sokoto State some similarities and differences emerged. The calculated CYP from the two data sources was not the same but the trends were similar – diverging most dramatically in 2014. The CYP was higher for DELIVER in 2011, 2012 and 2014 than TSHIP.

Sokoto CYP by Data Source, 2011-2014
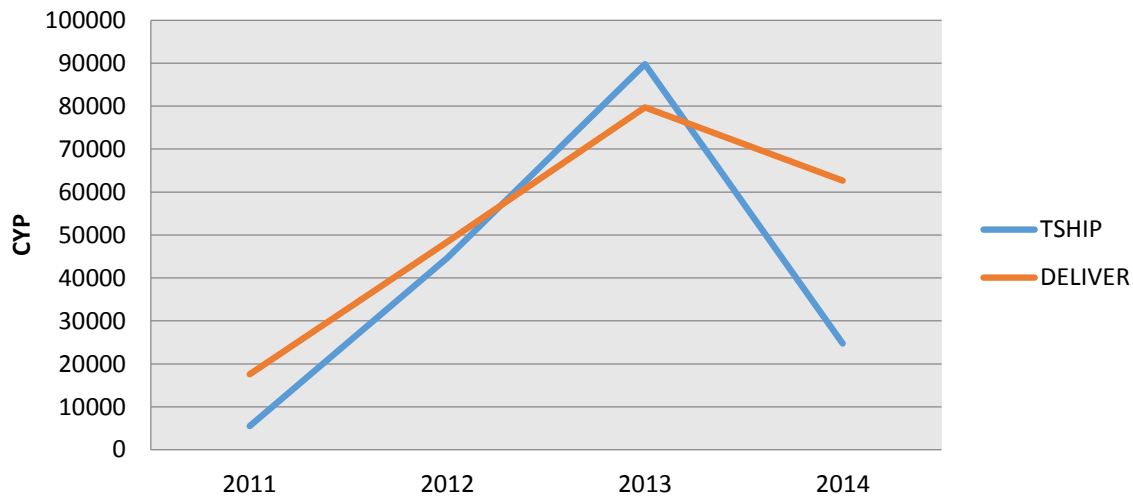
When examining the difference by specific method, more dramatic differences arose. Except in 2011, IUD use was much higher in the TSHIP data when compared with the DELIVER data, and the difference between the two widened in 2012 and 2013.

Sokoto IUD Use by Data Source, 2011 - 2014
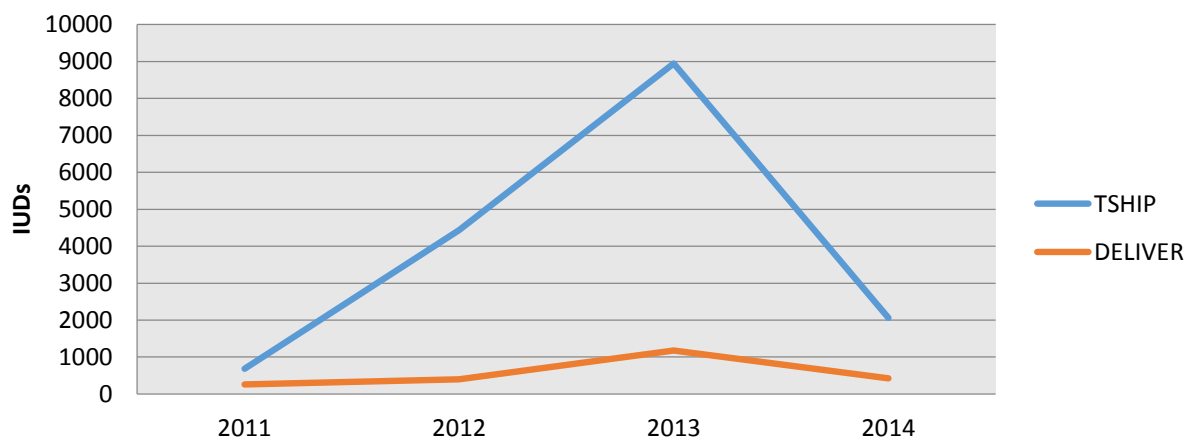
Upon further examination of the IUD data from the two sources, differences between the two was quite extreme – in the number of facilities reporting IUD use, the facilities themselves, range of use and average use. It was difficult to ascertain the reasons for these differences from the data sets.

IUD Examination

	Number of Facilities	**Range of Use**	**Average Use**	**SD**
2011				
TSHIP	7	1-147	37	51.7
DELIVER	30	2-100	22.8	25.7
2012				
TSHIP	141	1-755	31.4	73.5
DELIVER	18	1-112	21.9	29.2
2013				
TSHIP	147	1-3271	60.9	280.2
DELIVER	29	1-279	40.6	55.7

Bauchi

When comparing TSHIP and DELIVER data for Bauchi State, the calculated CYP was similar in the earlier time points, then widely diverged in 2012, 2013 and 2014. In 2014, the reported CYP from the Bauchi DELIVER data was much greater than that reported by the Bauchi TSHIP data.

Bauchi CYP Data Source, 2010-2014
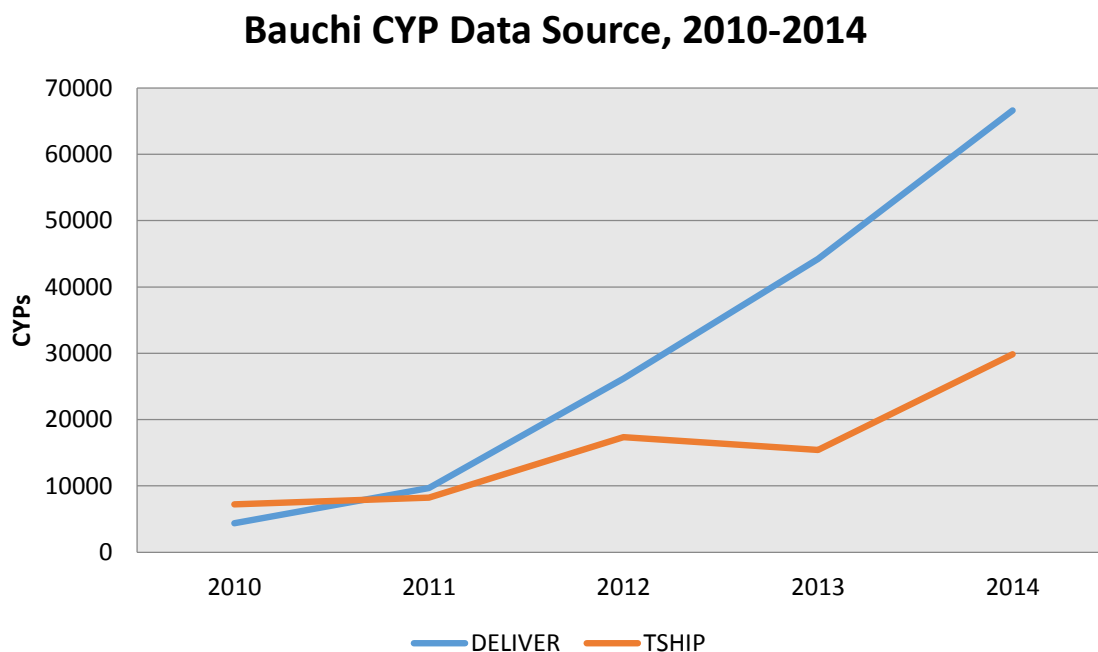
Unlike the Sokoto IUD data, and unlike the diverging Bauchi CYP data by data source, the IUD data were fairly similar from 2010-2014 in the two data sources.

Bauchi IUD by Data Source, 2010-2014
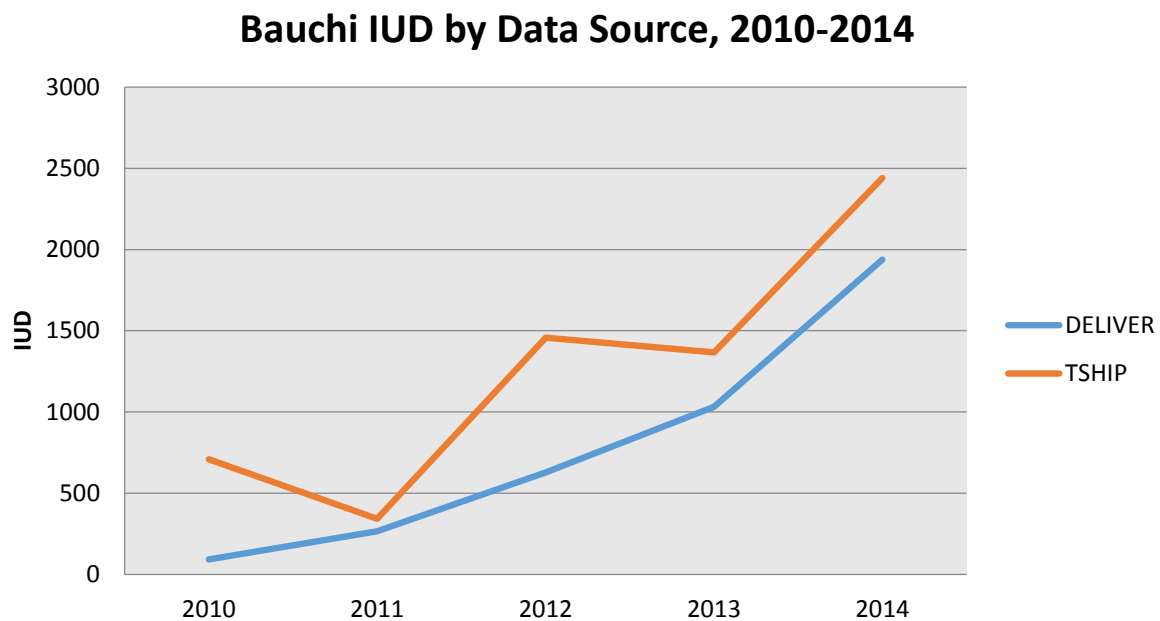
Comparing DELIVER and SFH Data Sources

When comparing the total CYP in the DELIVER and SFH datasets, it appeared the CYP from SFH was greater than that from DELIVER in 2012. This relationship changed in 2013 – with DELIVER providing a higher CYP equivalent than SFH in both states.

DELIVER and SFH CYP Comparison, 2012-2013
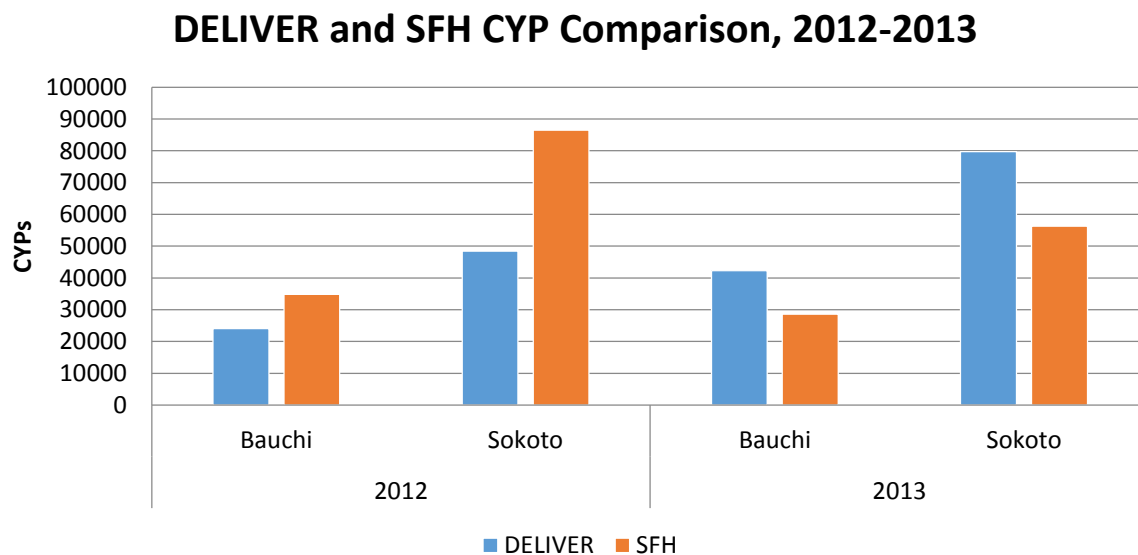
Numerator and Denominator Comparison

It is clear from the data and resulting graphs that use of family planning methods requiring commodities in these two states increased from 2009 to 2014. It is also likely that the population of WRA (15-49) increased in the same time period. To check whether the apparent increase in commodity contraceptive use increased in tandem with, or in excess of, the population increase, the service statistics were compared to the population projections.

Population data for this analysis was obtained from the National Population Commission. Data were available for the population at the LGA level in 2006, when the last Nigerian census was conducted, as well as estimated growth rates at the LGA level.

The 2006 population as well as the growth rates were used to calculate the estimated population, and population of WRA, for 2008 and 2013, as these were the years of the two latest full Nigerian DHS. The LGA data were then summed at the regional and state levels.

To ascertain the change in population between 2008 and 2013, the absolute increase in population at the regional level was calculated as well as the percent increase.

Commodity method use was calculated for 2009, 2011 and 2013 using the DELIVER commodity data. Data in Bauchi were first collected in 2009 – so for this analysis, 2009 was used as a proxy for 2008. Data in Sokoto were first collected in 2011, so for this analysis, the data in 2011 were used as a proxy for the data that would have been available for 2008.

This was likely an overestimate of the use in 2008 in both states, especially so for Sokoto State, which was a major limitation, but it was better to overestimate the baseline use as opposed to underestimating it.

When calculating the commodity method use – the total number of IUDs and implants used was included, as was a third of the Depo Provera use, a fourth of the Noristerat use, a twelfth of the oral contraceptive use, and 120th of the male and female condom use. These totals were then summed for a commodity method use amount.

This exercise examined whether an increase in commodity usage outpaced the increase in the WRA population. In other words, the increase in contraceptive commodity use was not simply a result of an increase in WRA population – it surpassed the increase that would have been necessary to keep up with the population increase for consistent use, as was observed in the 2008 and 2013 Nigerian DHS.

With these data, it was also possible to estimate a commodity contraceptive prevalence rate, or commodity CPR, for 2009 and 2013 – with the 2013 population estimate as the denominator and the commodity estimate as the numerator, calculated as noted above.

This estimate was likely an underestimate as those individuals who were using the implant and IUD in years prior and did not discontinue use were not included in the numerator. In addition, not all family planning facilities were included in the DELIVER data. Finally, these data only included the public facility data that were available from DELIVER.

In Bauchi, the population was increasing at a rate of 0.18. Commodity method increase exceeded that of the population, indicating that the increase in commodity usage was not simply a result of the population increase.

However, the commodity contraceptive rate, using these data, was very low. Despite the impressive increase in use over time, the amount of use relative to the size of the population in Bauchi was minimal.

The calculated contraceptive commodity rate for Bauchi was 0.25% in 2009, lower than the NDHS estimate of 1.63%. In 2013, the estimated contraceptive commodity rate was 1.85%, which was fairly close to the Nigerian DHS estimate of 1.88%.

Bauchi

Population of Women of Reproductive Age				
	2008	**2013**	**Absolute Increase**	**Percent Increase**
Northern	512,451	605,697	93,245	0.18
Southern	587,514	694,418	106,904	0.18
Total	1,099,965	1,300,115	200,149	0.18

Commodity Method Use				
	2009	**2013**	**Absolute Increase**	**Percent Increase**
Northern	1,792	17,905	16,113	8.99
Southern	906	6,194	5,289	5.84
Total	2,698	24,099	21,401	7.93
Commodity CPR	0.25	1.85		

For Sokoto, the population increase ranged between 0.16 and 0.18 by region, and 0.17 overall, between 2008 and 2013. The percent increase in commodity method usage ranged between 1.3 and 3.6 percent, and overall it was 2.4.

The commodity CPR for 2013 in Sokoto State using this method, and only data from public facilities, was estimated at 6.92%, which was higher than the estimate from the Nigerian 2013 DHS of 0.5%.

Sokoto

Population of Women of Reproductive Age

	2008	2013	Absolute Increase	Percent Increase
Central	270,946	313,470	42,525	0.16
Southern	336,207	392,239	56,032	0.17
Eastern	248,504	293,362	44,857	0.18
Total	855,657	999,072	143,415	0.17

Commodity Method Use

	2011	2013	Absolute Increase	Percent Increase
Central	8,767	19,775	11,007	1.26
Southern	8,269	38,377	30,108	3.64
Eastern	3,484	10,991	7,507	2.15
Total	20,521	69,143	48,622	2.37
Commodity CPR	2.19*	6.92		

*Using the population estimate for 2011, not 2008, of 938,748

QUALITATIVE RESULTS

Facility Observations

Female and male condoms, oral contraceptives (exluton and microgynon), injectables (depo provera and noristerat), implants (jadelle and implanon), and the copper T IUD were available in all facilities, with the exception of a few rural facilities that had no implants and/or IUD because the providers there had no skills for implant or IUD insertion. They could only provide oral contraceptives, condoms and injectables.

In terms of records, client information was captured in the Daily Family Planning Register, which records the commodities utilized daily. The providers used the daily register to record and collate the total number of family planning users monthly and report to the HMIS officer. All observed facilities were using Requisition, Issue and Report Forms (RIRF) to obtain stock when needed.

The quantities of commodities supplied to the facilities were usually entered in the RIRF, which were normally loose sheets. Stock cards which were supposed to contain the quantities of each of the commodities were only available at one urban secondary health facility; however even at this facility they were not being filled as stock was being utilized.

There was no evidence in all the facilities that providers reconciled the stock of family planning commodities using the daily consumption register with the client register. Instead the information in the client register was usually collected by the HMIS officers to monitor family planning utilization while the daily consumption register was used by those that supply commodities to the facilities.

HMIS Officers

Family Planning Service Data

HMIS Officer respondents in this study had a wide range of facilities (19 to 400) under their purview – depending on whether they were LGA or State HMIS officers. The number of FP service delivery points where data were collected changed over time, usually increasing, as more FP services were offered in additional facilities, and as new facilities were constructed and commissioned.

FP data were not routinely analyzed according to respondents, but if there was a need, they could easily do it and enter it in the dashboard of the DHIS 2 platform (a web-based open source information system for data) for wide viewership.

No respondent indicated there were definite periods of visiting facilities to monitor data collection as the data were collected at facilities and keyed into the DHIS 2 platform at the LGA level, which the HMIS officer "*can always access from their tables.*" The occasional visits happened during data quality assurance (DQA) activities and for supportive supervision, or when data quality issues were noticed from facilities, and visits were made to address those issues.

Three keys issues were indicated as the motivators for visiting facilities that included the need to, "*keep the health worker informed,*" "*fix lapses*" and "*in order to encourage health workers to strengthen health talk so as to draw the people's attention to accept the practice (of family planning).*"

HMIS Records and Data Collection and Monitoring

Respondents in the two states indicated that to ensure data was collected in a timely manner, there were usually reminders around the 3rd of the month, and all LGAs were expected to upload their data for the previous month before the 14th day of the current month.

In the two states, monitoring and evaluation (M&E) officers at health facilities (or the facility record officers/in-charges) liaised with the service providers monthly to collect the data (using NHMIS form) and transmit it to the LGA M&E officer, who keyed it into the DHIS 2 platform that could be accessed from anywhere. At the LGA level, if data quality issues were observed, the facilities were asked to correct them before they were entered into the DHIS 2 platform. The FP data were usually not collected separately and were entered on the NHMIS form with other healthcare data.

In both states, respondents reported that the main difficulty with data collection related to, "*airtime to make reminder calls to LGAs on HMIS data and to buy internet data.*" There were also reported difficulties with poor internet access. Other reported difficulties were the: "*attitude of staff at facilities and LGAs to data collection,*" leading to delayed submission of data, and reported logistics difficulties facilities encountered in bringing their monthly data summary to the LGA headquarters.

Data Quality

Respondents in the two states said they used the opportunity of supportive supervision visits to check for data quality, which entailed checking facility registers and ensuring they were concordant with the monthly HMIS summary forms.

Respondents in the two states perceived data to be reasonably accurate and appreciated the positive role of TSHIP on the issue of data quality; for example a respondent in Sokoto State said, "*you can't have 100% efficiency (sic), but 95% to 98% the data is accurate. I also carry out DQA to ensure data accuracy. I do this for two hospitals monthly, and even at the TSHIP office we still run through the data to ensure accuracy.*"

All respondents in the two states concurred on the need for "*capacity building*" for stakeholders to improve data accuracy. Capacity building in areas mentioned included accurate use of NHMIS monthly data summary forms and utilization of data. Lack of imprest for day-to-day running of HMIS/M&E units was also cited by a respondent in Sokoto State as one area for improvement.

TSHIP Program

All of the HMIS respondents were able to say the targeted nature of the TSHIP intervention was to improve maternal and child health in Bauchi and Sokoto states. A Bauchi State respondent said "*they help towards the health of mothers and babies. They also help in capacity building. They have also renovated four or five hospitals, too.*"

A Sokoto State respondent said: "*it is a program funded by the American Government to assist Bauchi and Sokoto states to strengthen health care services in the two states. They have assisted tremendously in the State.*"

All HMIS officers in the two states could contextualize the beneficial role of TSHIP in their work. They mentioned impact areas such as HMIS tools, DQA, and entrenchment of supportive supervision and capacity building.

For example, a Bauchi State respondent said "*before the emergence of TSHIP we did not have sufficient NHMIS tools. But they supported the state in providing them and also towards training of health officers in the facilities on how to use these tools.*"

JSI/DELIVER Program

Bauchi State respondents said they did not work directly with DELIVER, but knew they were involved with logistics. Only one respondent in Sokoto State said he attended meetings with DELIVER where FP stock consumption was discussed and vetted. A respondent in Bauchi said he knew a colleague who does.

Trainings

Respondents in both states said they had trainings related to the use of DHIS 2, M&E, Excel, data presentation, fixing computer glitches and health research ethics which "*have impacted on my job.*" One respondent said "*I can't remember the actual number but I have attended a couple and they were not one-day trainings. Some lasted almost ten days.*"

All respondents in the two states said they continued working with TSHIP after the trainings, and the continuing relationships were very vital. All the respondents had a positive perception of TSHIP staff and said *"they are friendly and honestly they are good,"* and "w*e are grateful; their absence would not help us in the clinics. If someone that has been helpful wants to leave, and there is no one to continue, it is not nice.*"

Utilization of Family Planning Services

According to the HMIS officers there were still perceptions in the general public that FP can lead to permanent infertility; however, an HMIS officer in Bauchi State said people were increasingly realizing the "*importance of family planning how it can help sustain family health.*"

There was universal agreement among all the HMIS officers that people now accept FP more than they did before, with the change attributed to activities of TSHIP. For example, a respondent in Bauchi said "*use of contraceptives has increased from when TSHIP got involved.*"

The respondents in the two states felt that women had more access to FP health education than men, due to their having more opportunities to access such information during ANC, post-natal care and immunization visits. This created a gap in the perceived need for family planning services between men and women, with more women aware of a need for contraceptives. In a society where men dominate decision-making, this gap in information sharing and behavior could lead to clandestine use of FP service by women.

A Sokoto State respondent added that, "*because women conceive and deliver, and so they know the difficulties they face, they are more likely to have positive attitude about contraceptives.*" Respondents in Bauchi and Sokoto States said the positive change in attitude to family planning started in the last

"*four to five years*." All respondents attributed the increased utilization of FP services to increased awareness and access to services.

All HMIS officers agreed that their data records showed an increase in utilization of FP services. For example, a respondent said "*in the DHIS 2 we upload, there is a column for family planning and we see an increase. Sometimes the changes are remarkable and I even have to assess them over again*." All respondents said that injectables and implants are the favorite methods used by clients.

Reasons for Differences in Family Planning Use Reported in Household Survey Data in Comparison to Data from Family Planning Facilities

Respondents said women may not give accurate information about their contraceptive use if the interviewers were men, and that they may not "*want to say it probably because they are shy. Sometimes privacy is the issue and how the questions are asked*."

Family Planning Providers

Sixteen family planning providers in urban and rural areas of Bauchi and Sokoto States were interviewed. Their ages ranged between 26 to 60 years. Their job qualifications included midwife (3), nurse (2), midwife and nurse (4), senior CHEW (3), environmental health assistant (2), while one was an attendant.

Training

The majority of the providers (10 out of 15) had at least one training in the provision of family planning services. Four of the providers were trained each by Marie Stopes and TSHIP while two were trained by both of them. In most cases the trainings were on long-term contraceptive methods, such as the IUD and Implanon. A few also learned how to provide counseling to family planning clients through training, as this provider from an urban area of Bauchi state said "*in the training I learnt counseling, instrument processing, how to manage clients that return with complaints after they have had their family planning*," and "*we were trained on how to approach patients and help them choose the methods they want.*"

All of the providers interviewed said they benefited from the trainings provided and that the trainings had positive impacts on the services they provided to their clients. A provider from an urban area of Bauchi State reflected this when she said "*yes it was useful, because I previously did not know how to insert Implanon and Jadelle. I just know the usage of oral contraceptives and injectables. Since then till now I have inserted more than one thousand Implanon and five hundred Jadelles to clients*."

Another provider added that "*it was very useful to me because I didn't know the other methods until after the training. And how we were to allow patients make choices on the methods they want*."

When asked about training needs, three providers from PHC facilities (two in Bauchi and one in Sokoto state) chose "*IUD, because we have the stock but don't know how to insert them*."

Number of Providers Trained Per Facilities

The majority of the facilities had at least three providers who were trained in family planning. Some of the facilities had just two or even just one family planning provider. A provider in a PHC in Sokoto mentioned that "*it is just me who has been trained on family planning.*"

Some of those who had the trainings also trained other staff in their facilities to provide family planning to clients. A provider in an urban area of Sokoto explained that "*I know only three people in this facility who are trained and when they came back, they taught me how to insert and how to give family planning.*"

In some facilities, there was a reduction in the number of staff trained to give family planning services. Some of the reasons given for this reduction included relocation due to marriage and transfers to a different facility. A provider reported that, "*I cannot recall because then we were many, up to ten, but due to transfers we are only three…*"

Record of Family Planning Clients

All of the providers said they kept a register of women that access family planning services from their facilities. The data on each family planning client was usually collected by "a*nyone who sees the client.*" In some facilities "a *health information officer… keeps the register.*" In cases where the providers were overwhelmed, tasks were shifted to other staff in the facilities. A provider in Bauchi State highlighted that, "*if there is a lot of work, our attendants fill out the register because she is educated,*" while another provider in Sokoto State mentioned that "*sometimes we tell the record department to register it.*"

The data obtained was usually submitted to TSHIP (seven providers across the two states), Marie Stopes (four providers), local government (12) and general hospital (one). In some cases, the data were submitted to two or more areas. In some cases, representatives of the recipient bodies came to collect the data while other times, the providers took the data to them. In all of the facilities surveyed, the data were submitted on a monthly basis.

Stock Outs

Eight of the providers interviewed said they never had a stock out. One of the providers in a secondary health facility in Sokoto State stated that *"(TSHIP) won't even allow the stock to finish before they bring more, once it's low they bring more.*" Another provider in a PHC facility in the same state mentioned that "*if the 'in charge' sees that it is almost finished, she goes to get for us.*"

Whenever there is a stock out, the providers either "*went to other clinics and got supplies,*" "*we usually call the FP coordinator and it is replenished,*" or, "*if the stock is finished before we are called for meeting, I write an emergency request for supplies from MCH from the local government.*"

TSHIP

Fourteen of the 16 providers interviewed had good awareness about TSHIP. A provider in Bauchi State mentioned that "*they help Sokoto and Bauchi pertaining antenatal, family planning and other services within the hospitals.*" Some of help provided by TSHIP included staff training (13 providers), provision of

health deliverables (13), facility renovation (10), supportive supervision (eight), improved health outcomes (five), and community outreach activities (three).

A provider in Bauchi State explained that "*they help reduce the maternal mortality rate and they reduce the cost of things like before Implanon and Jadelle was around two thousand or three thousand but now it's free so they help increase the turn up of women*."

Change in Flow of Family Planning Clients

All the interviewed providers believed there was an increase in the number of clients accessing family planning services in their facilities. One of them reflected on this when she said "*there has been an increase, women are accepting family planning more*."

The majority of respondents reported that the increase in clients was noticed after the training provided by TSHIP and Marie Stopes. One of them confirmed that "*immediately after the training. It wasn't more than six months after that we noticed improvement. When I came initially at the end of a month, we usually had twenty to thirty clients but now it has improved*." Another respondent mentioned that, "*from three or four years back we were having only thirty in a month but now we have about three hundred*."

Reasons given for this increase included increased awareness of family planning methods, free access to service, and decreased complications from contraception. These reasons were reflected in responses of the providers such as "*TSHIP sends some women to rural areas to educate them about ANC and family planning and even here we do talk to them about after delivery so that they can come back if they are interested*."

In addition, another provider opined that "*there has been an increase in education. Even those through colleagues and friends that come to the clinic get educated. So more women come for family planning,*" while another one remarked that "*when it wasn't free, they couldn't afford it but now that it is free, they practice it more*."

Contraceptive Preference

In most of the included facilities, injectables were reported as the most preferred method by family planning clients. This was followed by implants and then oral contraceptives. A respondent in a PHC facility in Bauchi stated that "*they use two methods most: injectables and implants, but injectables are used more,*" while another one mentioned that "*mostly they like Noristerat injection, hardly IUD but Implanon and Jadelle are now common*."

In other areas, implants were the preferred contraceptive by the clients. A provider in a secondary health facility in Sokoto State, reported that "*Implanon is the most common,*" while another one from the same facility confirmed that "*they come for Implanon more than injectables, out of five you can have three for Implanon while one or two will go for injectables*." Another provider from a rural PHC stated that "*before we started using Implanon and Jadelle, injection was the most preferred but now the majority are on Implanon then injectables*."

Payment for Family Planning Services

Nine of the providers, distributed across the two states at different facilities, affirmed that their clients did not pay anything for family planning services. One of the providers said "*they do not pay any fees, not even for syringes because it's hard for us to run out of syringe,*" while another from a PHC in rural area expressed that "*they don't pay money at all.*"

However, in some facilities, tokens were collected for "*cotton wools,*" "*syringes,*" "*processing instruments*" and "*cards.*" Money collected ranged from twenty to fifty naira for cards, twenty naira for syringes, and a provider stated that "*if it is IUD and implants we collect two hundred naira for processing instrument and injections.*"

Consent of Clients' Husbands

A husband's consent for family planning was universally required before initiation of family planning services by all the providers. In all but one of the facilities, verbal consent was sufficient, while in urban facilities some women came with "*consent forms.*" In some cases, "*the husbands come together with their wives.*"

In some cases, women came for family planning "*in secret*" without their husband's consent because "t*hey think their husbands won't agree but they really need to be on family planning.*" A provider in Bauchi State added that "*I even go to the extent of calling the husbands of some clients to seek confirmation if I am not entirely convinced.*" There were instances where initiating family planning without the husband's consent resulted in medico-legal problems. A provider in Bauchi State said that "*a policeman came and insulted us that we gave family planning to his wife without his consent. We even invited the village ward before the issue was settled. But the man refused that he did not permit her.*"

In cases where clients come without their husbands' consent, the providers in some facilities across the state may "*counsel her to go and inform him so that they would agree to avoid future problems.*" However when there is fear the husbands may not agree, and "*it's a critical case that involves their health, maybe a womb complication from a previous birth,*" the providers "*don't insist,*" they "*just give them what they need.*"

Family Planning Clients

A total of 32 interviews were conducted with current family planning clients – 16 per state. The clients interviewed were between the ages of 18 to 45 years, with modal age being 30 years. The respondents were married for one to 35 years, with their number of children ranging from one to 10 children. The respondents were using contraception for one to four years. The most commonly reported contraceptive methods used were: injectables (15), implants (13), oral contraceptives (three), and IUD (one).

Awareness of Family Planning

The majority (11) of the clients were introduced to family planning in health facilities, often when they went to access a non-family planning-related health service. This synergy was demonstrated by a 29-

year-old with three children from urban Bauchi who said "*we came for immunization that was when we were oriented about it. I indicated interest and it was administered*."

Eight of the family planning clients interviewed mentioned it was their husband who suggested they get family planning. One of the clients, a 30-year-old with two daughters from urban Sokoto said that "a*fter my first delivery my husband told me that it is good we take caution, my husband first talked to me about it, he even brought me to the hospital*."

Social groups (five clients) and media (three clients) were also important sources of information for some of the clients. A middle-aged woman with five children from a rural area in Bauchi stated that "*truly, I saw women doing family planning and I said I should also accept it so that I can rest too.*"

Family Planning Experience

Respondents in both states reported using oral contraceptives, injections and, in recent years, implants. Some clients transitioned through various methods of contraceptives due to side effects. For example, a 28-year-old respondent from urban Sokoto with two children said, "*firstly I started using pills and I discovered that it didn't fit me because I was bleeding; then I came and collected injection, but I feel lazy coming to the hospital, so I decided to use the one they put on the hand*." Another 30-year-old woman married for 15 years with five children from rural Bauchi said *"I started using Depo, but I had issues of blood over flow during my period. Then I switched to Noristerat. That is what I am using now*."

The majority of the interviewed clients in the two states expressed a preference for long-acting contraceptive methods, as they reduce the need for frequent visits to the healthcare facility and safeguard against forgetfulness with methods needing recurrent usage like oral contraceptives. They also reported a preference for implants due to their longer lasting nature, and perceived a lower tendency to cause side effects than injectable contraceptives.

Some clients said they accepted implants based on the advice of healthcare workers and they are happy with that decision. Only one respondent said she has no problem using oral contraceptives on a daily basis, and feels they are the most optimal contraceptive for her. The overwhelming majority of respondents said they like their current contraceptive method, and have no side effects, or the side effects are minimal and tolerable.

Attitudes about Male Providers

The majority of the clients in the two states said they prefer a female provider citing reason as being "*shy with male provider*" and "*males (husbands) are jealous.*" The type of method also seems to be affected by the provider, with IUCD less likely to be accepted from a male provider.

A significant number of clients said they would have no problem with a man giving them an injectable contraceptive or dispensing oral contraceptives to them. Some clients said they will accept male provider since it is for their health, and especially if the male provider is the only provider in the hospital. About half of the respondent said in spite of their preference for female provider, they will still accept service from male provider if he is the only one around.

Discussion of Family Planning with Husband

Husbands were generally supportive of the use of family planning by their wives. In some cases, the men were actually the first to suggest their wives enroll in family planning (most often on health grounds). In cases where the women initiated the talks on family planning, they were usually political and non-confrontational. They made sure that they first educated their spouses about family planning before either suggesting that they should do it or allowing the husbands to make the ultimate decision.

One of the clients, a 28-year-old with two children remarked that "*I told him that what we are supposed to do it to protect our children because getting pregnant with a small baby is dangerous for the child especially when the baby is still breastfeeding, that's what I told him*." Another client, a 36-year-old with four children said *"I humbly explained to my husband. I briefed him on what the heads of the clinic explained to us. He accepted and even brought me himself for the family planning*."

Family Members' Views on Family Planning

Family members' responses to the use of family planning ranged from support to apprehension. In some cases, the clients convinced their family members to enroll in family planning services. Despite the improvement in the acceptance of family planning methods in the two states, apprehension remained for some. This was either on religious grounds or due to misunderstandings about family planning.

A 19-year-old with four children from urban Bauchi complained that "s*ome relations think that if a woman wants to rest, they think that she doesn't want God's plan since it is God who gives children*." Another client, a 32-year-old with six children from urban Sokoto, lamented that "*my relations don't want it, there is even one that told me to stop it and their reason is that you should continue giving birth because you don't know who will help you*."

Some clients confessed they did not discuss family planning issues with their families for fear that confidentiality would not be kept and also to avoid being looked down upon by other family members. A 22-year-old with four children from rural Sokoto State opined that *"I didn't tell anyone."* Another 28-year-old with three children from an urban area in Bauchi State reported that "*I don't know what they think because I don't sit to talk to them,*" and a 30-year-old with six children said *"I didn't tell them since it is a secret except the person I am staying with*."

Friends' Views on Family Planning Use

The family planning clients interviewed unanimously mentioned that their friends were aware of their family planning use and they themselves even used it. In some cases, the friends introduced the clients to family planning and vice versa.

A 25-year-old with one child in a rural area of Sokoto State stated that *"they think (it) is good because even one advised me before I got married that it is good."* Another client from rural Bauchi affirmed that "*there are some of my friends that do it and they enjoy it and even one called me and she said she was grateful for what I did for her."* Despite this wide acceptance among the friends of family planning clients, some friends think family planning should not be practiced. A client in rural area of Sokoto State complained that "*they even say, 'What will you tell God when you use family planning?'"*

The majority of the clients discussed family planning issues freely with their friends. Most of the friends became interested in using family planning following such discussions. A middle-aged woman in Bauchi State said that *"some of my friends asked me why one of my children is six and the other one is three and I told them this is the interval I gave them from using family planning and they said they were going to do (the) same."*

Community Norms around Family Planning

There were mixed feelings regarding family planning by the communities as reported by the clients, with the majority accepting it while others were still skeptical about it due to religious reasons and fear of complications. Acceptance was reported to be higher in urban compared to rural areas.

A 50-year-old with five children in a rural area of Sokoto State opined that *"There (are) some that are not enlightened and there are some that take their wives to the hospital themselves."* A 32-year-old respondent with six children from urban Sokoto State highlighted that *"now people are doing family planning, before if you come here to the clinic you won't see people you have to do it secretly.*"

Clandestine Use

All the clients interviewed noted that although some men allowed their wives to access family planning services, acceptance of family planning was much higher among women compared to men. There were still some men who did not allow their wives to practice family planning, but in most cases, the women went ahead and did it secretly.

A middle-aged woman from rural Sokoto said *"the men are still lagging behind but every woman wants to rest, the women want it but the men have not fully supported them,"* while another 30-year-old with three children also from rural Sokoto added that *"women are more exposed than men because a woman can influence her husband's decision and also can do it even without her husband's consent."*

Changes in Views on Family Planning

All of the clients thought there was an improvement in awareness and uptake of family planning in their communities and families. Most of the changes were reported to be within the last five years. Others related the change to enlightenment in health facilities and one client said it was because the services were free. Some of the views shared by the clients included:

> *"There has been (a) change within the period of three to four years. You see, since the coming of this (TSHIP) organization, there has been a lot of change, they gave posters, if some of them see the posters and can't read, they will understand and they also created awareness on radio, through these avenues, people get the necessary awareness.*"
> – 35-year-old with six children from an urban area of Bauchi

> *"You see if they put it (Implant) for people they don't have any problem and if they remove it, you can get pregnant and you also don't need to pay for anything.*"
> – Young mother of three children from urban Sokoto

Views on Interviews on Family Planning At Home

Many respondents said they did not want to be interviewed in the presence of others. The reasons they gave ranged from shyness to confidentiality. A 50-year-old with five children from rural Sokoto said "*I will not say it amongst people maybe there is someone I am shy of, I really won't say it even if am using it.*"

In urban Sokoto, a 30-year-old with six children said "*I might not respond properly because it is considered as a private issue when I am in public,*" and a 30-year-old with six children from rural Bauchi added "*I will say I don't do it, because it is a secret between you and your husband.*"

A 35-year-old with five children in rural Bauchi State suggested she would only accept interviews on family planning from a female interviewer. She stated that "*if it is a woman like me, I will answer her but if a man, I won't want to answer him because am shy.*" "*It is an issue that requires a level of secrecy,*" said by a 36-year-old with four children from urban area of Bauchi.

About half the clients reported they would undergo interviews on family planning at their homes. For example, a 35-year-old with five children from rural area of Sokoto said "*I will tell you I'm using it even if it is in the presence of people because people know about it now.*"

Knowledge and Impact of TSHIP

Eight respondents interviewed in the two states said they knew about TSHIP. Comments related to TSHIP activities included "*they take care of women,*" "*support family planning,*" "*enlighten people on family planning,*" "*providing drugs to stop bleeding and care for umbilical cord stump,*" and provide "*client's seats.*"

Other comments included:

> "*We are happy with what TSHIP brought to us; before I don't stay up to a year before I give birth, but it is different now.*"
> – 30-year-old married woman with five children from rural Sokoto

> "*(TSHIP) has helped to reduce birth rate and death rate of babies and mothers because (of enlightenment that) some mothers under eighteen years are not well grown (physically) while giving birth, (and) it leads to their death, and then sometimes the babies may die too; and older women need space between their pregnancies to ensure that their body is ok before conceiving another pregnancy.*"
> – 25-year-old married woman with one child from rural Sokoto

CONCLUSIONS

Based on the literature review, quantitative analyses computed on the household survey and facility-level data, and the qualitative study, the following conclusions were reached.

Fertility Preferences Affect the Focus of Contraceptive Promotion

Males in Northern Nigeria desire large families. Females also desire large families, albeit not as large as the men. Given this fact, efforts focused on limiting childbearing will likely not succeed in this context; however, efforts focused on child spacing is acceptable and welcome.

Low Knowledge of Contraception

One of the striking findings from the DHS surveys and the LQAS surveys for Bauchi and Sokoto was the level of knowledge about family planning. In the LQAS sample, 67-70% of non-users reported a lack of knowledge about methods as the main reason for non-use. The literature review reported higher levels of knowledge about contraception; however, these results were not specific to the two focal states for this study.

Fears about Modern Methods of Contraception Were Prevalent

Fears about contraception were abundant – some based on actual side effects and others on misconceptions about contraceptive side effects. Fear was a critical barrier to increasing modern contraceptive uptake.

Training of Providers Was Beneficial and Extended Beyond those Trained

Family planning providers with training had more accurate knowledge about contraceptive methods and were more positive about providing these methods. Providers noted that after they were trained, they had more skills, and were able to serve more clients with a broader range of methods. Providers also noted that trained providers were likely to share their new knowledge and skills with colleagues at their facilities who did not attend the training.

Supervision of Family Planning Providers and Data Monitoring Needed

Studies showed the powerful effect of routine supervision on family planning program effectiveness. Efforts should be made to make supervision a routine effort – so both the supervisors and providers know how often supervisory visits will occur and what will happen during the visits.

Task Shifting in Contraceptive Delivery Works

The literature review highlighted that community-based distribution of injectable contraceptives was feasible in this context. In addition, the efforts in these two states to increase access to long-acting methods in Bauchi and Sokoto was reflected in the facility-level data – as seen with the high use of injectables and the growing use of implants. It is possible that IUD use might also increase with task shifting of this method as well.

Women Prefer Female Providers

The family planning clients were asked about their family planning gender preferences and the responses were clear: most women prefer female family planning providers. In this context of low educational attainment among women, TSHIP found it challenging to find educated women in the communities who can be trained to provide family planning. While this issue remains a challenge, it is worth the effort to continue seeking potential women candidates or to institute long-term mentorship programs to address this issue.

Service-Side Barriers to Contraceptive Use Still Exist

Despite the strong focus on enhancing the service side of contraceptive provision, barriers at the service delivery level still existed, such as limited hours of operation, contraceptive commodity or supply stock outs, and frequent transfers of trained providers.

Variation Exists in Household Survey Findings

The modern and commodity contraceptive prevalence rates were reported as between 2% and 3% for all surveys in Bauchi from 2008 to 2014 except for the LQAS in 2012 (7%) and the SMART 2014 Survey (8%). In Sokoto from 2008 to 2014, all surveys reported a modern or commodity contraceptive prevalence rate between 0.6 and 2%, except the 2012 LQAS survey (7%). For most surveys, except the LQAS 2012, the contraceptive prevalence rate reported in Bauchi exceeded that of Sokoto.

Household Survey Data Collection Methods Matter

Perhaps the LQAS survey results are outliers due to the unique survey design or in the delicate care the data collection team took to set up appropriate communication with the respondents, such as special efforts made during the research assistant recruitment and data collection processes. Research assistants were recruited from the states where the survey was conducted and spoke the local dialect to facilitate communication with respondents. "Data collection started with identification of the community leader – the *Miangwa* – who helped in sampling the initial household and allocated a guide responsible for moving along with and introducing the interviewers to the selected households during the exercise." (TSHIP LQAS Report, 2013). It is also important to note that all interviewers were female.

Household Survey Findings Differ from Facility-Level Findings

Current contraceptive use in Bauchi is consistently higher than in Sokoto in the household survey data. The opposite is true when examining facility-level service data.

No Increase in Private Sector Commodity Use

There was no apparent increase in modern method contraceptive use from January 2012 to July 2014 in the SFH private facilities commodity reports. Male condoms were the top commodity supplied for both states in private facilities – more so for Bauchi than Sokoto. The volume of commodities supplied to private facilities in Sokoto exceeds that for Bauchi.

Increase in Number of Facilities in Data Sets Observed but still not 100% Coverage

The total number of facilities supplied by DELIVER in Bauchi increased each year from 2009 (129) to

2014 (580). There were a total of 1,101 recognized family planning facilities in Bauchi; therefore, by 2014 these data represented approximately half of the total number of family planning facilities in Bauchi State.

From 2011 to 2014 the total number of facilities supplied by DELIVER in Sokoto increased each year (465 to 574). There were a total of 727 recognized family planning facilities in Sokoto; therefore, the DELIVER data represented around 70-80% of the family planning facilities in Sokoto State.

It is interesting to note the differences in number of facilities between the DELIVER and TSHIP data sets. The relationship changed over time – sometimes there were more facilities represented in the DELIVER data and vice versa.

Despite the increases in the number of facilities included in the facility-level datasets, it was unclear why the data sets only included a proportion of all family planning facilities in the two states.

Reduce Facility-Level Data Collection Efforts to Increase Data Quality

Through this exercise facility-level data from two projects, DELIVER and TSHIP, were compared to try and assess reasons for inconsistencies in reported contraceptive use. It was a challenge to compare the two datasets as they differ in a number of ways – and the results in use using the two were so different. In the end, it seemed as though neither data source could be accurate – since both were supposed to measure the same thing and yet both yielded such different results.

Given the difficulties in managing data at the facility level – from the provider through to the supplier –it may be in everyone's interest to consider streamlining data collection activities. For example, if DELIVER is collecting facility-level data to determine how to best supply stock to the facilities, is it necessary for the facilities to also record stock levels and report this through an additional system?

It was a challenge to accurately collect data at the facility level for a long time, for very valid reasons – providers were set in their ways of only entering data into the daily register, providers were busy with other tasks and data fell to the bottom of their priority list, providers transferred facilities often so there is a lack of continuity in practice, there was a lack of supervision of providers – in particular in regards to data entry and management, and there were difficulties in transferring data from the facility level to the next level.

If one system were used – and all of these efforts focused on one system – there might be a higher likelihood of success in accurate data collection than when efforts were segmented into multiple data collection efforts.

Increasing the Probability of Accurate Household Survey Responses

To better understand the variation in contraceptive prevalence by household survey type, and between household survey and facility level data, questions were asked of the qualitative study participants about how women in this context would respond to interviewers requesting information about their contraceptive use.

It was corroborated among the three included study populations – HMIS Officers, family planning providers and family planning clients – that women would be shy to respond to questions about their

personal contraceptive use. Their response would depend on a number of factors: the gender of the interviewer, the location of the interview, the nature of the questions and the awareness of their contraceptive use among others.

The likelihood of accurately reporting contraceptive use to an interviewer was low if the interviewer was male. Family planning providers and clients both noted the occurrence of clandestine contraceptive use. While this type of use was not considered ideal – it was considered an option in the scenarios that warranted the need. In terms of women responding to interviewers about their contraceptive use based on other's awareness of their use – certainly women using them clandestinely would fall into a category of potentially reporting non-use.

This was not the only type of women who would report non-use while using, however, as respondents indicated that this was a private matter and the accurate response might not be shared with an outsider – even if her partner, and/or others, were aware of her contraceptive use.

Modern Contraceptive Use Remains Low but Is Increasing

Barriers to modern contraceptive use remain at the individual, couple, family, community and facility levels in Bauchi and Sokoto States. As a result, modern contraceptive use remained low; however, modern contraceptives use appeared to be increasing – not remaining flat as reported in the Nigerian DHS.

In both states, the commodity increase surpassed the population increase; however, only Sokoto had a higher contraceptive prevalence rate (7%) than what was reported in the household surveys (1%).

In sum, based on the reports, data available, and the analyses conducted, it was likely that use of modern commodity contraceptives increased in Sokoto State – unlike what was reported in the household surveys. The increase in contraceptive use in Bauchi remained at a low level – but the trend data showed some promising findings. If the trend continued, contraceptive use in Bauchi would also continue to increase and exceed the stagnant level reported by the household surveys.

A Successful Approach to Increasing Modern Contraceptive Use

Part of the success in moderately increasing family planning use in these two states hinged upon the broad approach of the project, as initiated by USAID, to encompass multiple areas of health, especially maternal and child health. In this context where fears of modern contraceptives were rampant, a project focused solely on increasing use of modern contraception would likely face a lot of resistance.

The efforts in this area were perceived in the community as a project that aimed to improve maternal and child health. Through this more-welcome focus, they were able to attract positive attention to modern contraceptive use. In particular, the project was able to successfully focus on child spacing, as opposed to child limiting, which was more welcome in this context.

Demand-Side Activities Needed

It was clear that there has been a very strong service side focus. What appeared to be lacking was a focus on demand creation. While there were a few activities aimed at demand creation, there were not enough. Given the exciting changes observed in increasing contraceptive use in these two states, and all

of the service support in place and maintained, the potential impact of increased demand generation activities was palpable. The demand side activities could build upon the provider training and the current networking already occurring among current users with their friends. Areas in need of more creative approaches will be incorporating men, and other family members typically resistant, into the family planning dialogue.

ISSUES AND CHALLENGES

A number of issues and challenges emerged with this study, as delineated in the list below.

1. **Literature Review:** The inclusive geographic area for the literature review had to be expanded beyond Bauchi and Sokoto States to include the Northwest and Northeast regions due to the dearth of research specific to family planning in the two focal states.

2. **TSHIP LQAS Survey in Bauchi and Sokoto:** The reported sample size for the two surveys was over 3,000 individuals; however, all results were reported for less than 1,000 individuals (around 380 men and 380 women). It was unclear what was included in the 3,000 sample.
   a. The number of non-users reported in the Sokoto sample was less than expected given the total sample size and the reported number of users.

3. **SFH Bauchi Commodity Data:** SFH did not have a warehouse in Bauchi. Commodities for Bauchi were routed through the nearest warehouse, which was located in the city of Jos. SFH could not provide an accurate way to measure the amount of use in Jos directed to Bauchi – they suggested a 40% conversion factor to do so. When asked for more detail, they were unable to provide any.

4. **SFH State Level Data:** The SFH data were provided at an aggregate state level (except for Bauchi, see item above), not at the facility level – so direct comparisons with the facility level data available from DELIVER and TSHIP was not possible.

5. **TSHIP Data Format:** The setup of the composite service statistics data set for each state was different. It was unclear why the individuals working in the two states used different methods for tracking the monitoring data and it led to questions concerning the quality of the data – especially the lack of oversight of data collection procedures in the two locales.

6. **TSHIP Data:** The data provided by TSHIP included a few oddities that raised questions about the quality of the data. Data heaping was apparent, in different months for different methods. In addition, consumption data were available for dates after the date the data set was sent. Finally, there was no delineation of the type of injectable or implant in the data set limiting the ability to calculate a more accurate CYP for the full data set.

7. **DELIVER Data:** Inconsistencies were found in the DELIVER data during analysis. Some of the common issues were: multiple rows of data for the same method in the same facility, methods labeled incorrectly, repetitive data for facilities and different facilities with the same unique identifier. There was also inconsistency in tabulations, particularly in the DDIC dataset in terms of mismatch between the beginning balance and stock-on-hand columns – resulting in a report of negative commodity consumption.

8. **Facility-Level Data:** Upon discussions with DELIVER and TSHIP colleagues about the data issues discovered through this analysis, it became clear that there were a few common issues in facility-level data entry: (1) the internet is crucial for data entry, based on the data entry systems used, and when the internet connectivity was inconsistent – data entry errors abounded; (2) data entry programs used to enter the data were not always set up to handle all types of data scenarios – resulting in errors in the data sets; and (3) the maintenance of the data entry to identify errors from points 1 & 2 was lacking in that these errors were found repeatedly during this study.

9. **Comparing DELIVER and TSHIP Data:** When comparing data sets for the same time period for the same state, it was disappointing to observe the number and range of differences between the two data sets – in particular for the IUD and female condom in Sokoto, and even in the number of facilities represented. Upon further examination of the specific Sokoto IUD data sets, it was clear that the two data sets were most different and difficult to compare as covering the same location during the same time period. This finding, more so than any other, resulted in significant loss in confidence in the accuracy of the two data sets.

10. **Qualitative Study:** The qualitative study was limited in size due to the type of data collection so the results presented here cannot be generalized to the entire study area.