

# **The Effectiveness of Community-Based Access to Injectable Contraceptives in Nigeria**

**A Technical Report**



**May 2010**

## Contents

---

1.	Background.....	6
1.1.	Family planning and the Millennium Development Goals (MDGs).....	6
1.2.	Global efforts to improve access to FP services .....	6
1.3.	Nigeria’s adaptation of CBD of injectable contraceptives.....	7
1.4.	Nigeria’s reproductive health profile .....	8
1.5.	Access to FP services in Nigeria .....	10
2.	Nigeria’s community based access to injectable contraceptives – pilot project.....	11
2.1.	Project background.....	11
2.2.	Project objectives .....	11
2.3.	Selection of the pilot site .....	11
2.4.	Background on Gombe State and Pilot LGAs .....	13
2.5.	Family planning services in Gombe State.....	14
2.6.	Intervention strategy.....	14
3.	Findings.....	19
3.1.	Socio-demographic characteristics of CBA acceptors .....	19
3.2.	FP uptake and Couple Year of Protection (CYP) .....	19
3.3.	Safety.....	21
4.	Discussion .....	21
5.	Conclusions.....	25
6.	Recommendations.....	25
	References.....	26

# Acknowledgements

---

This pilot project was made possible through funding by the United States Agency for International Development (USAID) under the Contraceptive and Reproductive Health Technologies Research and Utilization Program (CRTU).

FHI acknowledges the efforts of all those who contributed to the success of the CBA pilot project implementation, particularly Nigeria's Federal Ministry of Health, Association for Reproductive and Family Health (ARFH), Gombe State Ministry of Health, Funakaye and Yamaltu/Deba LG authorities and their traditional and religious leaders.

We are especially grateful to the Nigerian National Reproductive Health Working Group and the CBA Technical Working Group for their guidance throughout the implementation of the pilot.

Finally, we thank the FHI staff at the FHI Headquarters in North Carolina, United States, the Nigeria Country Office, and the Bauchi Zonal Office who provided support to the project. We hope that the lessons learnt from this pilot will add to the body of global evidence on the effectiveness of community-based family planning programs and will inform future scale-up activities in Nigeria.

## Acronyms

---

<b>ANC</b>	Ante-Natal Care/Clinic
<b>APROFAM</b>	La Asociación Pro Bienestar de la Familia de Guatemala
<b>ARFH</b>	Association for Reproductive and Family Health
<b>CBA</b>	Community-Based Access
<b>CBD</b>	Community-Based Distribution
<b>CHEW</b>	Community Health Extension Worker
<b>CHO</b>	Community Health Officer
<b>CPR</b>	Contraceptive Prevalence Rate
<b>CYP</b>	Couple Year Protection
<b>DMPA</b>	Depo MedroxyProgesterone Acetate
<b>FHI</b>	Family Health International
<b>FMOH</b>	Federal Ministry of Health
<b>FP</b>	Family Planning
<b>HIV</b>	Human Immunodeficiency Virus
<b>IMR</b>	Infant Mortality Rate
<b>IUCD</b>	Intra-Uterine Contraceptive Device
<b>IUD</b>	Intra-Uterine Device
<b>LGA</b>	Local Government Area/Authority
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MDGs</b>	Millennium Development Goals
<b>MMR</b>	Maternal Mortality Rate
<b>NDHS</b>	National Demographic and Health Survey
<b>PHC</b>	Primary Healthcare Centre
<b>RH</b>	Reproductive Health
<b>STI</b>	Sexually Transmitted Infection
<b>TFR</b>	Total Fertility Rate
<b>TWG</b>	Technical Working Group
<b>UN</b>	United Nations
<b>UNFPA</b>	United Nations' Fund for Population Activities
<b>USAID</b>	United States Agency for International Development
<b>WHO</b>	World Health Organization

# Executive Summary

---

**1. Background:** Despite the acknowledged benefits of family planning, access is still not universal with those in most need disproportionately disadvantaged. In order to reduce the unmet need for contraception, reproductive health programs have sought ways to expand access to and coverage of FP services. One of the approaches is the community-based distribution of contraceptive commodities using various cadres of workers and volunteers.

**2. Nigeria's community based access to injectable contraceptives – pilot project:** In collaboration with the Nigerian Federal Ministry of Health and Association for Reproductive and Family Health (ARFH), FHI piloted a CBA project over a period of 16 months in 10 wards of two Local Government Areas – Funakaye and Yamaltu/Deba of Gombe state. These sites were objectively selected using specific selection criteria. The pilot specific objectives were:

- To create an enabling environment for provision of injectable contraceptives through community based agents;
- To improve capacity for community-based provision of injectable contraceptives;
- To enhance the quality and standard of practice of community based provision of injectable contraceptive
- To document best practices and experiences from the pilot project

**3. Implementation steps:** The implementation of the pilot project followed 8 detailed steps, from identifying and engaging stake-holders to selection and training of 30 CBA volunteers. CBA kits were provided with an initial supply of commodity - seed stock.

**4. Findings from the project:** The CBA project reached 2,363 clients during the pilot period. Males accounted for 13.9% of the total CBA acceptors. 55% of FP clients were between the ages of 25 – 34 years. The male condom had the highest uptake (6,376 units). Only 173 female condoms were dispensed. In total, 1,216 cycles of oral contraceptive pills, 1,076 doses of Noristerat, and 1,022 doses of Depo Provera were accessed through the CBA. The CBD of contraceptives yielded a significantly higher CYP (582) compared to facility-based services (143) ( $p < 0.01$ ). The CYP from injectable contraceptives alone was 439 for the CBA (75% of CBA CYP) and 123 (80% of facility CYP) ( $p < 0.01$ ). No volunteer reported needle stick injury. Waste management was adequate.

**5. Conclusion:** The findings of this CBA pilot suggest that there is potential for impact if the innovation is scaled-up in Nigeria. It demonstrated the feasibility of community-based provision of injectables contraceptives in a culture sensitive setting of Nigeria.

**6. Recommendation:** It is recommended that this CBA pilot be scaled-up. This will entail i) training of lower cadre of staff on FP and may need the adoption of task-shifting policies to allow more cadres of staff to provide longer acting methods; and ii) the contraceptive commodity supply chain be strengthened and user fees abolished as they pose a significant barrier to accessing FP services.

# 1. Background

---

## ***1.1. Family planning and the Millennium Development Goals (MDGs)***

The elimination of the unmet need for family planning (FP) is an important sub-objective of the millennium development goal (MDG) #5, a goal that seeks to improve maternal health. Arguably, all MDGs can directly or indirectly benefit from an effective FP program (UN Millennium Project, 2005). The direct contribution of FP to MDG #5 stems from FP's ability to allow couples to plan for adequate spacing between children, which gives women time to recover between pregnancies, and thereby limiting women's lifetime risk of maternal death.

By increasing control over the timing of pregnancy, FP reduces demand for abortion of unwanted pregnancies; helps young women delay their first pregnancy, and reduces the number of high-risk pregnancies that result in high levels of maternal and child illness and death. Addressing unmet need in Nigeria for example could avert an estimated 18,849 maternal deaths and 1.1 million child deaths by 2015 (Moore, 2009, Health Policy Initiative, 2009b). FP contributes indirectly to achieving the other MDGs by saving costs needed to address other goals. For example, the cost of achieving universal primary education is influenced by the number of children in need of education. In the same light, FP slows population growth and thus reduces the strain on environmental resources thereby helping to reduce the cost of meeting the MGD on environment (Health Policy Initiative, 2009a).

## ***1.2. Global efforts to improve access to FP services***

The unmet need for FP remains considerable. Despite its acknowledged benefits, access to FP services is still not universally accessible. The poorest and disadvantaged segments of the population with the greatest FP need, have limited access. The global unmet need for FP is estimated to be 200 million women (UNFPA, 2008). A wide range of factors are associated with this unmet need, including the unavailability of services, cultural or religious barriers, and ignorance (Moore, 2009). The unmet need is particularly high in least developed countries, where unavailability of modern methods of contraception is a major problem. In sub-Saharan Africa, the FP needs of one in every four married women or in union is not fulfilled, a figure that has remained unchanged since 1995.

After a decline in the global funding for FP services, there are renewed efforts to improve access to FP services (Pathfinder International, 2004b, UNFPA, 2008, Ross et al., 2009). Since 1968, at least 38 global statements, calls for action and increased access to FP have been issued (FPHW, 2009). One of the approaches that are increasingly advocated is the community-based distribution (CBD) of contraceptives. Several CBD programs have been successfully piloted in different countries (Malarcher, 2009). The implementation of CBD has

mostly targeted rural communities and involved adding on Depo-Provera to the method mix of an already existing distribution of condoms and oral contraceptive pills program.

In the CBD programs described in the literature, the term community volunteers refers to a broad range of providers, including community-based distributors, community health workers, volunteer health workers and village health workers; the term does not include physicians, nurses, midwives, community health extension workers (CHEWs) or other facility-based providers (WHO et al., 2009). CBDs in Asia and Latin America are trained on basic reproductive physiology, contraceptive technology, counseling, screening, safe injection technique, infection prevention, waste disposal, reporting, acquiring and managing commodities, and a practicum to master injection technique (Kamal and Mohsena, 2007, Phillips et al., 1989, Routh et al., 2001).

The CBD programs use non-reusable syringes for safety. In addition to training, many projects used a screening checklist as job-aid. In most countries being female was a key eligibility criterion. However, Madagascar, Uganda and the APROFAM Project of Guatemala included male providers, though the proportion of male to female workers was quite small in all programs (15%, 20% and 26%, respectively). Remuneration schemes employed by various projects included compensation based on contraceptive sales, salaried employees, monthly transport stipend, volunteerism, periodic gifts that facilitate the work of the volunteers e.g. bicycles, umbrellas, backpacks and boots (Malarcher, 2009, Stanback et al., 2007). CBD of injectable contraceptives may take the form of visits to client's home e.g. in the Bangladesh project; or visits to the providers' home e.g. the Nakasongola, Uganda Project. (Stanback et al., 2007)

In an effort to inform future policies and programs on expanding access to injectable contraception, WHO, USAID and Family Health International (FHI) convened a technical consultation in June 2009 in Geneva. The consultation, a group of 30 technical experts reviewed scientific evidence and experiences of programs in Africa, Asia and Latin America which had expanded access to contraceptives through community volunteers and concluded that there is sufficient evidence to support the introduction, continuation, and scale-up of community-based provision of progestin-only injectable contraceptives by appropriately trained community volunteers. Community based provision of contraception was found to be safe, effective, acceptable and recommended to be part of a FP programme offering a range of contraceptive methods (Malarcher, 2009).

### ***1.3. Nigeria's adaptation of CBD of injectable contraceptives***

Nigeria has implemented CBD of condoms and resupply of oral pills by trained community volunteers since 2003 under the UNFPA supported community reproductive health project. In August 2007, FHI shared the evidence on CBD of injectable contraceptives with the Federal Ministry of Health (FMOH) in Nigeria and subsequently supported the FMOH's participation

in a study tour to Uganda in February 2008 to learn from the experiences of FHI, Save the Children and the Ugandan Ministry of Health in implementing and scaling-up CBD of Depo-Provera injectable contraceptive.

In March 2008, the report of the Uganda study tour was presented to the Nigerian National Reproductive Health Working group, which had the mandate to provide policy and technical guidance on all reproductive health issues in Nigeria. Drawing on the Ugandan experience, the RH working group approved the implementation of the CBD innovation with a caveat of adaptation to local contexts. This necessitated the formation of an 18-member CBD technical working group (TWG) mandated to come up with the adaptation modalities and provide guidance throughout the implementation of Nigeria's community based access (CBA) to injectable contraceptives pilot project.

Task-shifting in Nigeria was the most contested issue in the adaptation process. Unlike in the other countries that have implemented CBD of injectable contraceptive project with community volunteers, the Nigeria's adaptation did not approve of non-medical professionals administering injections on basis of safety. The CHEW, a low cadre of trained medical professionals working mainly in PHC facilities and the main health workforce in rural areas was the minimum cadre approved as providers of the community-based injectable contraceptives. The CHEW was introduced into the Nigerian health care system in the 1970s to alleviate shortages of medical personnel at PHC level, and particularly those in the rural areas. CHEWs are expected to spend half of their time on community based functions and the other half in the clinic. However, the chronic shortage of staff in the Nigerian health sector particularly in rural areas, has forced CHEWs to cease most of their community-based functions. CHEWs are trained in schools of health technology for a minimum of two years on the provision of integrated PHC services and community mobilization for health response (Garba, 2008). The Nigerian National Family Planning and Reproductive Health Policy guidelines and standards of practice designate CHEWs as facility-based providers of all FP methods except surgical methods, implants and intra uterine contraceptive device (IUCD).

Finally, Nigeria's pilot project did not opt for the conventional term community based distribution (CBD) as a project title, rather, it broadened the scope and adopted community based access (CBA) on the rationale that the approach will not only deliver commodities but seek to improve the overall access to underserved and hard-to-reach populations through culture sensitive approaches.

#### ***1.4. Nigeria's reproductive health profile***

Reproductive health status in Nigeria has remained poor with only a marginal improvement over time as reflected in the high maternal morbidity and mortality rate, high infant mortality rate, and low contraceptive prevalence rate. The status of adolescent reproductive health is poor, the prevalence of STIs and HIV especially among young people remains high, and the



attendance at ante-natal care is low and so is the proportion of deliveries attended by skilled personnel. This situation requires urgent intervention if related MDGs are to be met on time. Nigeria has a maternal mortality rate of 545 per 100,000 live births, an improvement from the 2003 figures of 704 per 100,000 live births. The average neonatal mortality is 40/1000, while the IMR is 75/1000 live births (NPC [Nigeria] and ICF Macro, 2009). Nigeria has a generalized HIV epidemic (4.6% prevalence) with women disproportionately affected. Of the 2.95 million living with HIV, 1.72 million are women (2008 ANC HIV sentinel survey).

Fertility has also remained high with a total fertility rate (TFR) of 5.7 births per woman, unchanged from the findings of the 2003 National Demographic and Health Survey (NDHS). Women in the age group 25 – 29 years report the highest fertility with 265 births per 1,000 women - fertility declines thereafter. TFRs are highest in Northern Nigeria. The highest TFR is seen in the North West (7.3), followed by North East (7.2) where this project was implemented; South East (4.8), South South (4.7), and South West (4.5), have lower fertility rates than the northern zones. Women with a higher than secondary education have a TFR of 2.9, compared with women with no education who have a TFR of 7.3. Women in the highest wealth quintile have an average of three children fewer than women in the lowest quintile (4.0 and 7.1 births per woman, respectively).

CPR patterns closely mirror total fertility rates. Despite the 72% knowledge of at least one contraceptive method by women, the CPR for any method among Nigerian married women is only 15%, one of the lowest in Sub-Saharan Africa (NDHS, 2008,). This has however risen from 6% in 1990, through 13% in 2003 to the current levels (NPC [Nigeria] and ICF Macro, 2009). There is a wide urban-rural disparity in contraceptive use among women (26% and 9%, respectively). The lowest proportion of married women using any FP method is in the North West (3%) followed by the North East (4%). The South West zone has the highest proportion of women currently using a FP method (32%), followed by South South zone (26%). Contraceptive use increases with educational attainment among Nigerian women. CPR for modern methods of contraceptives is 10%. The male condom is the most commonly used modern method at 5%. Injectables have 2% prevalence, similar to oral contraceptives. IUD and female sterilization are the least used (less than 1% each).

Although the figures are still low, the use of modern contraception has increased from 4% in 1990 to 10% in 2008. The largest increase was in the use of injectables, from 1% in 1990 to 3% in 2008 while condom use increased from less than 1% in 1990 to 2% in 2008. Depo Provera (63%) and Noristerat (21%) are the most commonly used injectable contraceptives. Among non-users, the proportion that prefers to use injectables has increased from 28% in 2003 to 32% in 2008 (NPC [Nigeria] and ICF Macro, 2009). These figures point to increasing popularity of injectables as a contraceptive method in Nigeria.

### **1.5. Access to FP services in Nigeria**

In Nigeria, the use of modern methods of contraception only marginally increased between 2003 and 2008 while unmet need grew from 17% to 20%. Of this unmet need for FP, 15% is for spacing and 5% for limiting, with more women in rural areas having more unmet need than their urban counterparts (NDHS, 2008). If all married women with an unmet need for FP were to use a contraceptive method, the Nigerian CPR for any method would increase from 15 to 35%. Unplanned pregnancies are common in Nigeria. It is estimated that 4% of births are unwanted, while 7% are mistimed (wanted later). If all unwanted births were prevented, women would have an average of 5.3 children, compared with the actual average of 5.7 children. Teenage pregnancy is high in Nigeria. Twenty-three percent of young women age 15-19 had begun childbearing (NPC [Nigeria] and ICF Macro, 2009).

The shortage of doctors, nurses, and midwives compounds Nigeria's unmet need for FP, particularly in rural areas where the majority of the population lives. In addition, the availability of modern contraceptive methods is limited because of a weak distribution chain. It is particularly the case for sterilization or implant services. Intrauterine devices (IUDs) are almost never provided due to provider concerns about STI risks and client's concern about partners' disclosure and perception. These barriers are accentuated by negative traditional perspective, religious as well as socio-cultural beliefs and myths about contraceptive use (UNFPA, 2002). For most women in rural areas, oral contraceptive pills and injectable contraceptives are the most commonly available options for FP.

When all modern contraceptive methods are considered, the private medical sector is the most common provider (60%) of FP services. Only 23% of users obtain FP from the public sector, mostly public hospitals (12%). However, injectables are sourced mostly from the public sector – hospitals (25.5%) and health centers (21.0%). Community-based channels of provision of contraception remain largely unexplored. Public fieldworkers account for only 0.8% of provision of contraception and private field workers in 1.2% of cases (NPC [Nigeria] and ICF Macro, 2009).

## **2. Nigeria's community based access to injectable contraceptives – pilot project**

---

### **2.1. Project background**

FHI implemented the Nigeria's CBA to injectable contraceptive pilot project from October 2008 to February 2010, in collaboration with the Association for Reproductive and Family Health (ARFH) and the Nigerian Ministry of Health. Although evidence to support the scale up of CBD exists, more information is needed on how CBD must be introduced and monitored in new contexts. This project therefore, sought to improve access to FP services by complimenting facility-based service provision of contraception with community based service provision in Nigeria.

### **2.2. Project objectives**

The objectives of the CBA pilot project in Nigeria were:

- To create an enabling environment for provision of injectable contraceptives through community based agents;
- To improve capacity for community-based provision of injectable contraceptives;
- To enhance the quality and standard of practice of community based provision of injectable contraceptive
- To document best practices and experiences from the pilot project

The expected project outcome is to increase the uptake for injectable contraceptives and potentially other family planning methods.

### **2.3. Selection of the pilot site**

The CBA technical working group (TWG) developed the guide to the implementation of the CBA pilot project. The TWG on 21<sup>st</sup> August 2008 recommended that the pilot be implemented in six states of the country, one from each of the six geo-political zones. However, due to funding constraints, the pilot was limited to only one state, chosen based on the following four criteria: i) an already existing CBD of contraceptive program, a platform on which to add injectable contraceptive; ii) a state with low contraceptive prevalence rate; iii) a state with high maternal mortality rate; and iv) a state with existing opportunities and potential for state government support and assured political commitment.

Only nine states in Nigeria had a CBD of contraceptive program – Ogun, Oyo, Edo, Plateau, Bauchi, Gombe, Kwara, Kogi and Borno. The program involved the distribution of condoms and provision of resupply of oral pills by community volunteers. Of these states, Gombe emerged the pilot state having met all the criteria. A site assessment was conducted to select

the communities where the CBA project would be implemented, using the following as the selection criteria:

1. LGA wards with established community based contraceptive programs that have linkages to the health system, commodity logistics system in place, functioning supervisory system with identified supervisors, scheduled and effected supervisory visits ; a formalized M&E system with standard tools, data collection process and data flow;
2. LGA’s interest and willingness to support implementation of the pilot project
3. Availability of the approved cadre of volunteers to provide services in the LGA: at least one CHEW to cover a ward

Five wards each in Funakaye and Yamaltu/Deba LGAs of Gombe state emerged the pilot sites with existing CBD programs implemented by the Association for Reproductive and Family Health, ARFH from 2003-2008 with UNFPA support. The ARFH CBD program trained male and female community volunteers to distribute condoms and provide resupply of oral pills to communities where they live.

Table 1. Distribution of PHCs in the two pilot sites

<b>Pilot LGAs</b>	<b>Pilot Wards</b>	<b>PHCs linked to Project</b>
Funakaye		
	1. Bage	Ribadu
	2. Tongo	Tongo
	3. Ribadu	Jalingo
	4. Bajoga East	Bage
	5. Ashaka/ Magaba	Sangaru
Yamaltu/Deba		
	6. Deba	Town
	7. Kanawa/Wajari	Dangar
	8. Kwadon/Liji/Kurba	Kwadon
	9. Hinna	Maikaho
	10. Jagali (North and South)	Dadinkowa

#### **2.4. Background on Gombe State and Pilot LGAs**

Gombe State has 11 local government areas (LGA) and two dominant ethnic groups: the Hausas and Fulanis. The state is predominantly rural, with a population of 2,353,879 people (2006 census) half of whom (49.9%) are females. Women of childbearing age account for 22%, while adolescents account for about 50% of the total population. This region of Nigeria, has one of the worst maternal and reproductive health indicators, illustrated by a MMR of 1,726/100,000 live births, three times higher than national average (FMOH, 2009). The HIV prevalence in Gombe is 4%, fuelled by the vibrant commercial activities in the State's capital and Funakaye LGA. The CPR is 4.0% for any method and 3.5% for modern methods; notably low compared with that of South Western Nigeria of 31.7% for any method and 21% for modern methods (NPC [Nigeria] and ICF Macro, 2009). This low CPR is compounded by inadequate information on reproductive health issues at the household level, while, access to services is constrained by social and physical barriers at the community level. There are 554 health facilities in Gombe state: one tertiary, 9 secondary and the remaining 544 are primary health facilities. The distribution of health workers by cadre in Gombe state as at September 2008 is shown in the table below.

Table 2. Distribution of health workers by type of facility in Gombe State, 2008

<b>Cadre</b>	<b>Type of Facility</b>			
	PHC	Secondary	Tertiary	Total
Doctors	8	56	90	154
Pharmacists	0	6	9	15
Pharmacy Technicians	0	21	3	24
Nurses and Midwives	240	590	159	989
CHO	55	13	0	68
CHEW	612	267	0	879
Environmental Health	84	63	3	150

Source: Federal Ministry of Health

## **2.5. Family planning services in Gombe State**

The pre-implementation assessment revealed that a key barrier to accessing FP services in Gombe was the people's socio-cultural misconceptions about FP. The CBA project had to adopt demand creation as a core strategy. Of the 554 health facilities in the state, only 110 provide FP services. The tertiary and secondary health facilities in the state provide a broader method mix – sterilization, IUCD and implants in addition to condoms, pills and Injectables. FP methods provided in PHCs were limited to condoms, pills and injectables due to lack of trained higher cadre staff to provide longer acting and permanent methods. Injectable was the most commonly used FP method among married women in the state. Stock-outs of FP commodities was common and at times lasted for as long as four months.

### **Funakaye LGA**

Funakaye LGA has 10 wards, five of which are included in the CBA project namely: Ashaka magaba, Bage, Bajoga East, Ribadu, and Tongo. It has a population of 236,087 (123,784 males and 112,303 females). There is a cement factory in Funakaye that employs about 625 staff, mostly migrant workers; and long distance drivers that contribute to the thriving commercial sex activities. Funakaye has a total of 46 health facilities (1 secondary and 45 primary health facilities) out of which 13 offer FP services. The LGA has 5 nurse/midwives and 50 CHEWs in the PHC facilities.

### **Yamaltu/Deba LGA**

Yamaltu/Deba LGA has a population of 255,248. It has 11 wards, five of which participated in the CBA project - Deba, Kanawa/Wajari, Kwadon/Liji /Kurba, Jagali and Hinna. Yamaltu/Deba has a total of 63 health facilities, 2 secondary and 61 primary health facilities and of these, 27 offer FP services. The LGA has 15 nurses / midwives, and 79 CHEWs who staff its PHCs.

## **2.6. Intervention strategy**

This pilot project engaged 30 CHEWs in expanding access to contraceptives in pilot community. The CHEWs were selected by staff of their local authorities and this project, trained them as community based providers, providing counseling, and a method mix of contraceptives that included Depo-Provera and Noristerat injectables in either their homes or the clients' homes. The trained CHEWs linked clients with health facilities for clinic-based methods (IUD, Implants, and sterilization) or for other medical conditions. In addition, they kept records (M&E function) on the uptake of commodities in the community and participated in demand creation activities.

## **2.7. Intervention steps**

### **2.7.1. Identifying and engaging potential stake-holders**

The project first identified and engaged stake-holders through advocacy visits and outreaches from the three levels (federal, state, LGA and community). In August 2007, the FHI team disseminated to staff of the reproductive health division of the Nigerian Federal Ministry of Health a package of advocacy literature that outlined the evidence supporting the CBA innovation. In February 2008 the project funded the participation of ministry of health staff on a study tour to Uganda to learn from the experiences of FHI, Save the Children and the Ugandan Ministry of health in the implementation and scale-up of a CBA Project. After the study tour, a CBA technical working group (TWG) was formed. This provided the platform to engage with Reproductive Health policy makers, the Nigerian Academia, health professional association and regulatory bodies at the national level and garner support for the CBA project.

Engaging the national level stake-holders opened doors to the state level. FHI and its implementing partner, ARFH, initiated contact with the staff of the Gombe State ministry of health and the two pilot LGAs in February 2009 and shared with them evidence from other countries supporting the CBA innovation. The relationships established helped stakeholders to take ownership of the new program, a necessary condition for sustainability

### **2.7.2. Promoting FP uptake and sensitising communities**

The CBA project, in collaboration with LGA authorities, made targeted efforts to promote acceptance of and support for the CBA pilot project within the communities served. The project funded and facilitated community meetings where FP information was shared in local language and participants were encouraged to use the new service.

Realising the role of traditional rulers, religious leaders and men as gatekeepers and agents of change, the first level of the sensitisation targeted this group and secured their commitment to support the project. In Northern Nigeria, FP program experiences had shown that once men were mobilised, their women would usually follow. Also male partner acceptance was a key determinant of a woman's adoption of a method of contraception.

The subsequent level of the sensitisation and community dialogue sessions targeted women. The sensitisation sessions offered the opportunity to dispel myths and misconceptions about FP raised by community members. Concerns raised in community meetings in the two LGAs included: modern contraceptives cause infertility, delayed return to fertility, irregular menstrual bleeding; injectable contraceptives reduce breast milk secretion, etc. The project team shared contraceptive information in local language, and educated women and men about correct use and common non-harmful side effects. Sensitization meetings continued throughout the life of the project. 643 community members (330 females and 313 males) were reached with FP messages in the two project LGAs during the life of the project.

### **2.7.3. Selection of volunteers**

The selection of the CBA volunteers was done by the LGA authorities based on the criteria recommended by the CBA TWG as outlined below:

- A CHEW at the minimum or a higher cadre medical personnel
- Be resident of the communities they would serve
- Be acceptable by the community
- Must be willing to serve the community voluntarily
- Preferably female
- Preferably above 25 years of age

All of the 30 selected CBA volunteers were female CHEWs aged between 28 and 40 years. The selection of the seven CBA supervisors was conducted similarly, the criteria being that they must be in-charges of PHC facilities in the community. Using in-charges as supervisors was in line with the existing supervisory structure of the health system.

### **2.7.4. Capacity building**

#### **Training**

FHI, ARFH and Federal Ministry of Health worked together to adapt a training curriculum for the training of the CBA volunteers and their supervisors. The adapted curriculum included modules on reproductive anatomy and physiology, contraceptive technology, counseling, client screening using job aids and checklists, medical eligibility criteria, injection technique, infection prevention, HIV, waste disposal, managing supplies, referrals and data collection. A five-day training was conducted for 15 master trainers (including the CBA supervisors) drawn from the Federal, State and LGA levels to promote sustainability and provide a pool of trainers for future scale-up activities. A training cascade was subsequently organised for the 30 volunteers using the adapted curriculum.



## **Support to community service provision**

At the end of the training, all volunteers were provided with CBA kits to carry and store the contraceptives safely. They were also provided with the initial supply of commodity - seed stock, which contained male and female condoms, combined oral contraceptives, progesterone only pills, Depo-Provera, Noristerat, syringes and swabs. The FMOH provided the initial stock as take-off support. The volunteers were to use the proceeds from user fees to replenish their stocks from the already existing government owned contraceptive supply chain. This fee ranged from one naira (0.006 US\$) for male condoms to 60 naira (0.4 US\$) for the injectables. Volunteers were also provided with data collection tools, safety boxes for safe disposal of medical waste, job aids and screening checklists to support service provision. The volunteers provided FP services either in their own homes or in clients' homes. Volunteers were given monthly transport stipend to enable them collect FP commodities from the LGA office and their supervisors also received monthly transport stipend to enable them conduct supervisory visits to their volunteers in their homes.

### **2.7.5. Linkages with health facilities**

The pilot project ensured linkages with health facilities. A facility in each of the pilot wards was selected for referring clients. The referral system was formalized by the use of referral forms which the volunteers were trained to issue to clients that were being referred.

### **2.7.6. Safety and waste disposal**

The safety of clients and the introduction of clinical waste to the community were of paramount concern in this pilot project. The risk to clients from intramuscular injections with pre-packaged, sterile syringes was minimal and the training program emphasised both screening clients and safe injection techniques. Moreover, the volunteer CHEWs were trained healthcare professionals with clinic experience in administering injections. The safety of the volunteers was also a concern, since the prevalence of HIV/AIDS in Nigeria was quite significant and injection always carried a risk of needle stick to a health worker. To minimize this risk, universal safety precaution was emphasized during the training and volunteers were supplied with safety boxes. No new waste-management systems were developed, volunteers CHEWs took their filled safety boxes to the health facilities where they work for safe incineration and they received new safety boxes.

### **2.7.7. Supply management**

The FMOH supported this pilot with the initial seed stock commodities at the onset of the project and subsequent supplies were to be accessed from its supply chain. As the service's popularity grew, volunteer CHEWs needed to receive more commodities to circumvent stock-

outs and keep clients on schedule with their repeat injections. The Gombe State Ministry of Health kept stock at the state ministry's storage facility for on-ward distribution to LGAs. Midway through the implementation of the pilot, there were FP commodity stock-outs. The project had to mobilize commodities from outside the government supply chain. This alleviated the problem in part, but commodity security is still a significant, ongoing challenge at all levels in Nigeria.

### **2.7.8. Monitoring and supervision**

A formalised supervision structure which followed the existing system was put in place to ensure adequate monitoring of the quality of service provision by the volunteer CHEWs. Supervisors conducted routine visits to their designated CHEWS using supervision tools. Monthly review meetings attended by partners, CHEWs, supervisors, LGA and state RH coordinators provided opportunities to review supervisory tools of effected visits and address recurring issues.

### **2.7.9. Data capturing tools and data flow**

#### **Data capturing tools**

Activity sheets were used to capture data on client age, sex, client continuation, the type of FP commodity provided, complications reported and client referrals. This tool was adapted from the Nigerian national FP register, by adding columns which captured clients who switched over from clinic provision to community-based provision, and columns to capture complications and referrals. The CBA volunteer CHEWs were trained to use the activity sheets. They were required to fill out this sheet each time they provided services to a client. Each supervisor collated monthly data from CHWS which she supervised using a supervisor's worksheet. Monthly summary forms were then used to aggregate this data. Data was collected monthly, during monthly monitoring and evaluation meetings held at the two LGAs. The data on facility-based uptake were derived from the routine FP service statistics in all the public health facilities located in the pilot wards of the two LGAs. The main outcome measure was the couple-years of protection (CYP). CYP was calculated by dividing the total quantity uptake of each FP commodity by the duration of protection provided, assuming an average of 10 acts per month. The number of each commodity required to make up one CYP were as follows: 120 units for condoms; four doses of DMPA injectable; six doses of Noristerat injectable; 15 cycles of oral contraceptives. The CYP for each method was summed for all methods to obtain a total CYP.

#### **Analysis**

Data were analyzed using Stata statistical analysis package version 10 [Stata Corp, 2007]. Frequencies were calculated and cross-tabulated to compare contraceptive uptake during the six months of pilot across the 10 pilot wards of two pilot LGAs (Funakaye and Yamaltu/Deba). Uptake of FP methods were compared between facility-based provision in

public health facilities and community-based provision of the pilot project during the same period in the same communities using test of difference in means. A sub-analysis was also done to compare the estimated CYP from injectables and condoms in facility-based access to that of the community-based access. The *p*-value from the test was used to assess the statistical significance of the difference in mean CYP provided by facility-based provision of contraceptives to that provided by community-based provision.

### 3. Findings

#### 3.1. Socio-demographic characteristics of CBA acceptors

Table 1 provides an overview of the characteristics of the clients reached during the period of the CBA pilot. A total of 2,363 clients were provided with contraceptives via community-based access in the 2 LGAs during the pilot period. Only 8% and 19% of the clients in Funakaye and Yamaltu/Deba LGAs respectively were males. In all, males accounted for 13.9% of the total CBA acceptors. The FP clients reached in the 2 LGAs were predominantly between the ages of 25 – 34 years (55%), followed by 25% being in the 15 – 24 years age group, and 18% being between ages of 35 and 44 years. The age distribution is similar across the two LGAs.

Table 3. Gender and age of users

	Funakaye LGA (n=1066)	Yamaltu/Deba LGA (n=1297)	<i>p</i>
<b>Sex</b>	<b>n (%)</b>	<b>n (%)</b>	
Male	82 (7.7)	247 (19.1)	<0.01
Female	984 (92.3)	1050 (80.9)	<0.01
<b>Age group (years)</b>			
15 – 24	255 (26.2)	308 (25.3)	0.047
25 – 34	545 (55.9)	653 (53.7)	0.052
35 – 44	164 (16.8)	235 (19.3)	0.374
> 45	11 (1.1)	19 (1.6)	0.381

#### 3.2. FP uptake and Couple Year of Protection (CYP)

The uptake of these FP commodities was equally distributed between the two LGAs. The male condom was the FP method with the highest uptake. A total of 6,376 units were dispensed in the two LGAs, while only 173 female condoms were dispensed. The majority (67% male, 80% female condom) of the total condom uptake was recorded in the Yamaltu/Deba LGA. In total, 1,216 cycles of oral contraceptive pills, 1,076 doses of

Noristerat, and 1,022 doses of Depo Provera were dispensed through the community-based system during the pilot period.

Table 4. FP commodity uptake by clients reached in the 2 pilot LGAs during the Pilot Project

	<b>Funakaye LGA (n=1066)</b>	<b>Yamaltu/Deba LGA (n=1297)</b>	<b>Total</b>
<b>FP commodity</b>	<b>n(%)</b>	<b>n(%)</b>	<b>n(%)</b>
Depo Provera	465 (45.5)	557 (54.5)	1022 (100.0)
Noristerat	551 (51.2)	525 (48.8)	1076 (100.0)
Oral Pills	685 (56.3)	531 (43.7)	1216 (100.0)
Male Condom	2050 (32.1)	4326 (67.9)	6376 (100.0)
Female Condom	34 (19.6)	139 (81.3)	173 (100.0)

Table 5 shows the comparison of the CYP provided through CBA project compared to that provided via facility-based provision in the 2 pilot LGAs. The CBD of contraceptives provided a higher CYP compared to the CYP from facility-based provision in both LGAs. In Funakaye LGA, a total CYP of 283 from all contraceptive methods was provided via community-based provision compared to 113 CYP provided by the facility-based provision in the corresponding wards ( $p=0.01$ ). Similarly, in Yamaltu/Deba LGA, 299 CYP was provided by CBD of contraceptives while only 30 CYP was provided by facility-based provision ( $p<0.01$ ). The CYP contribution from each contraceptive method individually is also higher in community-based provision than in facility-based provision in both LGAs. Depo Provera provided the highest contribution to the total CYP in Yamaltu/Deba in both facility-based (17 CYP i.e. 56% of total CYP from all methods) and community-based provision (139 CYP i.e. 47% of total CYP) ( $p<0.01$ ). In the same LGA, condoms contributed only 0.3% (i.e. 0.1 CYP) of the total facility-based CYP and 12% (i.e. 37 CYP) of total community-based CYP ( $p<0.01$ ). Similar pattern is seen for the contribution of Depo Provera and condoms to total CYP in Funakaye LGA, however the difference observed for CYP provided by Depo Provera in facility- and community-based provision is not statistically significant ( $p=0.07$ ).

Table 5: CYP from facility-based and CBA services during the intervention period

CYP	Funakaye LGA			Yamaltu/Deba LGA		
	Facility	Community	<i>p</i>	Facility	Community	<i>p</i>
All methods	113	283	0.01	30	299	<0.01
Depo Provera	55	118	0.07	17	139	<0.01
Noristerat	40	94	0.02	11	87	0.01
Oral Pills	17	48	<0.01	3	35	<0.01
Male Condom	0	23	<0.01	0.1	36	<0.01
Female Condom	0.3	0.4	0.89	0	1	0.01

### 3.3. Safety

During the course of the pilot, no volunteer reported any needle stick injury. Waste management was adequate with safety boxes filled appropriately, and disposed according to facility protocol.

## 4. Discussion

The ability to promote FP depends on the use of effective and innovative strategies to deliver these services to rural populations (Akol et al., 2009). One in three women experiences difficulty with transportation and distance to health facility as a major barrier to accessing health care (NPC [Nigeria] and ICF Macro, 2009). The CBA pilot project expanded access to FP in rural Northern Nigeria by complimenting the fixed facility-based service provision with flexible and culture sensitive approach of community-based access. The CYP in our CBA project was higher than that achieved in the health facilities in the two LGAs.

The high uptake of the pilot services by the rural communities and getting the buy-in and endorsement of this pilot by prominent traditional and religious leaders of the community were unique for Northern Nigeria. This is in view of the fact that firstly, in these communities, contraceptive use is particularly low with CPR for modern methods being 3.5% and for injectables 0.9% (NPC [Nigeria] and ICF Macro, 2009). Secondly, women are expected to involve their male partners before they can access FP services. Thirdly, the pilot services were not provided to clients for free, the usual user fees for methods were applied; and fourthly, these communities were known to often perceive FP as ‘foreign’ and ‘western’ and FP organisations are frequently suspect and as such gaining access and developing trust has usually been a challenge (Pathfinder International, 2004a).

Similar experiences of high FP uptake are recorded in community-based injectable contraceptive programs of many other developing countries. In rural Afghanistan, within

eight months of the innovation in the program area, contraceptive use increased by 24-27% with injectable contraceptives contributing most to the increase in contraceptive use (Huber et al., 2010). In Nakasongola, a rural district of Uganda, contraceptive prevalence increased by about five percent after community based provision of Depo-Provera was introduced (FHI, 2010). Bangladesh also demonstrated a 25% decline in fertility rates through comparing areas that received the community-based provision of Depo-Provera intervention with areas where the use of Depo-Provera was rare (Stanback et al., 2007).

The FP methods of the CBA pilot were provided to clients at the same user-fees as was obtained in the health facility. The only subsidy that might have occurred in favour of the community-based access was in transportation costs where a client lived very near a CBA provider and as a result did not have to incur transportation costs to access services. The pilot provided services for only six months.

The evidence generated from implementing this pilot was limited by the unavailability of a control group and the lack of access to the service data of all other informal undocumented community-based FP distribution channels, but provides useful insights and lessons learnt in how community-based provision can improve FP access in underserved populations in culturally rooted settings. A key constraint in the use of routine data is that it limits the number of data elements and therefore might not provide the level of details required to isolate special groups or events. For example, in our setting where the FP data in health facilities was being primarily collected for commodity requisition and procurement purposes, the lack of socio-demographic characteristics of the FP clients that accessed the facility-based service provision did not allow a comparison with the clients that accessed community-based provision.

### **Socio-demographic characteristics of FP clients**

The socio-demographic characteristics of clients that accessed FP services from the pilot project (community-based provision) showed that 13.9% were males. Even though the unavailability of the socio-demographic characteristics of clients that accessed facility-based provision prevents comparison, facility providers acknowledged that male clients do not normally access FP services in health facilities as the services were usually provided in maternity clinics and only women and children access these clinics. Based on this, the proportion of males that accessed the CBA project is encouraging. In Nigeria, motivating men to attend FP clinics is difficult (Nzapfurundi et al., 2009). Our findings therefore suggest that community-based access appears promising in reaching men with FP services and more efforts should focus on community-based approaches in reaching men.

The age group distribution of clients that accessed the CBA service provision was similar in the 2 pilot LGAs and consistent with the age distribution of female respondents who reported current-use of contraceptives during the NDHS 2008(NPC [Nigeria] and ICF Macro, 2009).

## **CYP achieved from facility-based and community-based service provision**

Even though this pilot did not achieve the task shifting in the provision of injectable contraceptives from medical professionals to non-professionals, it succeeded in weakening the argument against it, which may lead to the reconsideration of a policy change in the near future. The policy change this pilot however accomplished was in the shift in the level of service provision of injectable contraceptives and the initiation of pills from within health facilities to community level. Before this pilot, the Nigerian National and Reproductive Health Policy guidelines and Standards of Practice had limited the provision of injectable contraceptives and the initiation of pills to health facilities only. The only methods the policy had allowed to be provided at community-level were condoms, spermicides, vaginal foaming tablets, and resupply of pills (FMOH, 2004). This change in policy is seen as a major breakthrough and will be formally effected in the national policy at the next review of the document.

Another highlight of Nigeria's adaptation was its decision to add Noristerat injectable to the contraceptive mix for the pilot project. The TWG had cautioned that providing Depo-Provera as the only injectable contraceptive choice without the addition of Noristerat in a community based program might create suspicion and prevent uptake as there were so many misconceptions about Depo-Provera's delayed return to fertility as a side effect. Depo-Provera was the only injectable contraceptive provided by the vast majority of CBD programs that have been documented including that of Uganda which Nigeria's adaptation was largely based on. The few programs like the Abhoynagar, Bangladesh projects that added Noristerat at the beginning of the program dropped it after a few months of implementation focusing on Depo-Provera only (Malarcher, 2009).

Nigeria's pilot was therefore an opportunity to explore the effectiveness of community-based provision in complimenting facility-based service provision in rural communities. The health facilities and the pilot provided the same method mix. We compared the CYP for the facility-based provision and the CYP for the pilot (community-based) over the same period. The results on CYP from community-based provision might have been an underestimate, as the community-based data was limited to that of the pilot and did not consider other informal community channels. Yet findings show significant higher uptake of methods from community-based provision than from facility-based provision. These results suggest that community-based access is effective in complimenting facility-based access and should be considered. The utilization of FP clinic is low in Nigeria (Nzapfurundi et al., 2009) and complimenting it will be beneficial, access to FP services will improve particularly in rural settings and underserved populations. Community-based access will also help address the key barrier associated with distance in accessing health facilities. A study conducted in Uganda reported no significant difference in continuation rate between the two groups; 88% of CHW clients and 85% of clinic clients received the second injection. There were no significant differences between the two groups in measures of satisfaction or quality of care provided.

However, the study noted that the quality of counselling offered to clients could be improved in both settings (Stanback et al., 2007)

The higher CYP of the community-based pilot also corroborates the high unmet need for FP services in Nigeria. Nigeria's unmet need for contraception is 20% (15% for spacing and 5% for limiting) and is even higher among rural residents (NPC [Nigeria] and ICF Macro, 2009).

Our findings of a significantly high CYP contribution by injectable contraceptives support the evidence of high injectable contraceptive use when community-based FP programs are introduced (Huber et al., 2010, Stanback et al., 2007). These results also suggest that injectable contraceptives are a preferred method in rural Northern Nigeria particularly when communities are well mobilized. The Nigerian NDHS 2008 reported an increase in the use of injectable contraceptive from 1% to 3% between 1990 and 2008. World wide the need for injectable contraceptives is expanding with about 35 million women using the method, twice as many as a decade ago. In Sub-Saharan Africa, injectables are used by one-third of women on modern methods (WHO et al., 2009).

The significantly higher CYP contribution by condoms from community-based provision compared to that of facility-based provision suggest that community-based access is effective in condom provision and more efforts should focus on community-based channels in condom provision in FP as well as HIV prevention programming. Facility-based condom uptake was almost non existent because many health workers in these rural areas had not received FP training, had no knowledge of dual protection and many did not know how to insert a female condom; in Nigeria promoting male partner dependent methods is generally a challenge and only women typically attend FP clinics in these communities. The only realistic FP options available to the vast majority of women in rural Nigeria are pills and injectables. Longer acting and permanent methods are by policy only provided by higher cadre of health workers who are not usually available in primary level facilities where majority of the population access.



## 5. Conclusions

---

The CBA pilot demonstrates that there is potential for impact if the innovation is scaled-up in Nigeria. This pilot enabled a policy change in expanding provision of injectable contraceptives to community level. The CBA pilot provided the opportunity to explore complimenting facility-based FP provision with community-based access. It created an enabling environment for the introduction of community based provision to injectable contraceptives through identifying and effectively engaging with stakeholders at all levels; and through sustained advocacy and community mobilisation efforts. It improved capacity for the provision of FP. A national training curriculum was adapted and a pool of trainers from national, state and Local government levels was formed. It enhanced the quality and standards of practice of the community based FP provision by supporting adaptation of data collection tools, M&E systems, training and distribution of job aids. It demonstrated the feasibility of community-based provision of injectables contraceptives and provided lessons learnt that will inform future scale-up. It also adds to the body of global evidence that community-based provision is feasible even in culture sensitive settings with adaptation to local contexts.

## 6. Recommendations

---

- Scale-up of this CBA pilot. This will entail also the training of lower cadre of staff on FP
- Adopt task-shifting policies to allow more cadres of staff to provide longer acting methods.
- Strengthen the contraceptive commodity supply chain
- Abolish user fees, a significant barrier to accessing FP services.

## References

---

- AKOL, A., WAMALA, P., KRUEGER, K. & ABBOTT, A. (2009) *Scaling up community-based access to injectable contraceptives in Uganda: Lessons learned from private- and public-sector implementation*, [Research Triangle Park, North Carolina], Family Health International [FHI], 2009 Sep.
- FHI (2010) Community-based Distribution (CBD) of DMPA. Family Health International.
- FMOH (2004) National Family Planning/Reproductive Health Policy Guidelines and Standards of Practice. IN DIVISION, R. H. (Ed.). Abuja, Federal Ministry of Health.
- FMOH (2009) National IMNCH Assessment. Abuja, Nigeria, Federal Ministry of Health.
- FPHW (2009) Kampala 2009: Re-affirmation of global family planning commitments. *International Conference on Family Planning: Research and Best practices*. Kampala, Uganda, Family Planning Health Watch.
- GARBA, S. (2008) Management of Primary Health Care in Local Governments in Nigeria: Between Community. *Voice of Nigerians*. Jelsoft Enterprises Ltd.
- HEALTH POLICY INITIATIVE, TASK ORDER 1 (2009a) Family planning and the MDGs: saving lives, saving resources. Washington, DC, Futures Group International.
- HEALTH POLICY INITIATIVE, TASK ORDER 1 (2009b) Nigeria. *Achieving the MDGs: The contribution of family planning (MDG Briefs)*. Washington, DC, Futures Group International.
- HUBER, D., SAEEDI, N. & SAMADI, A. K. (2010) Achieving Success with Family Planning in Rural Afghanistan. *Bull. World Health Organisation*, 88, 227-231.
- KAMAL, N. & MOHSENA, M. (2007) Twenty years of field worker visitation in Bangladesh: Are they still needed? *Population Association of America, Annual Meeting, March 29-31, 2007*. New York, NY.
- MALARCHER, S. (2009) *A review of the evidence developed for a technical consultation on expanding access to injectable contraception*, [Research Triangle Park, North Carolina], Family Health International [FHI], 2009 Jun.
- MOORE, A. (2009) If we're serious about the Millennium Development Goals, let's get serious about Family Planning. Washington, DC, The Henry L. Stimson Center.
- NPC [NIGERIA] & ICF MACRO (2009) Nigeria Demographic and Health Survey 2008. Abuja, Nigeria, National Population Commission and ICF Macro.
- NZAPFURUNDI, O. C., AWI, D. D., CHUKWUJEKU, O., ABUBAKAR, Z., GWARZO, U., IBRAHIM, M., MERRIGAN, M. & HAMELMANN, C. (2009) The use of routine monitoring and evaluation system to assess a referral model of family planning and HIV service integration in Nigeria. *AIDS* 3, S 97-103
- PATHFINDER INTERNATIONAL (2004a) Improving women's lives in the muslim world.
- PATHFINDER INTERNATIONAL (2004b) U.S. Support for International Family Planning Programs. *Advocacy Fact Sheets*. Watertown, MA, Pathfinder International Advocacy Programs.
- PHILLIPS, J. F., HOSSAIN, M. B., HUQUE, A. A. & AKBAR, J. (1989) A case study of contraceptive introduction: Domiciliary depo-medroxyprogesterone acetate services in rural Bangladesh. IN SEGAL, S. J., TSUI, A. O. & ROGERS, S. M. (Eds.) *Demographic and Programmatic Consequences of Contraceptive Innovations*. New York, Plenum Press.
- ROSS, J., WEISSMAN, E. & STOVER, J. (2009) Contraceptive Projections and the Donor Gap: Meeting the Challenge. Washington DC, Reproductive Health Supplies Coalition.
- ROUTH, S., ASHRAF, A., STOECKEL, J. & E-KHUDA, B. (2001) Consequences of the shift from domiciliary distribution to site-based family planning services in Bangladesh. *International Family Planning Perspectives*, 27, 82-89.
- STANBACK, J., MBONYE, A. K. & BEKIITA, M. (2007) Contraceptive injections by community health workers in Uganda: a nonrandomized community trial. *Bull World Health Organ*, 85, 768-73.
- UN MILLENNIUM PROJECT (2005) Who's Got the Power? Transforming Health Systems for Women and Children. *Summary version of the report of the Task Force on Child Health and Maternal Health*. New York, USA.
- UNFPA (2002) Gombe State Programme document. Abuja, Nigeria, United Nations Fund for Population Activities.
- UNFPA (2008) Ensuring that Every Pregnancy is Wanted. *Reproductive Health*. New York, United Nations Population Fund.
- WHO, USAID & FHI (2009) *Community-based health workers can safely and effectively administer injectable contraceptives: Conclusions from a technical consultation*, Research Triangle Park, North Carolina, FHI, 2009.