

Summary of Nigeria experience – implementing PNC home visits: March 26, 2012

1. Background

This summary reviews progress with improving early PNC home visits in three States in North Western Nigeria - Kano, Zamfara and Katsina. In these States the ACCESS and MCHIP projects worked in partnership with the Federal and State Ministry of Health. The goal was to reduce maternal and neonatal mortality by delivering a minimum package of maternal and newborn interventions at community and facility levels. In project areas there was a focus on: antenatal care (ANC), comprehensive and basic EmONC, postpartum care, family planning and healthy timing and spacing of pregnancies. The Household-to-Hospital Continuum of Care (HHCC) approach was used. The HHCC addresses all three delays¹ associated with maternal and newborn deaths by improving household and care-seeking practices, empowering the community to create and maintain a supportive environment for increased utilization of services, and improving the quality of care provided at health facilities at all levels. ACCESS was operational in Nigeria from January 2006 to December 2009. MCHIP ran the project until December 2011.

The Northwestern States Kano, Zamfara and Katsina have predominantly rural communities and a high burden of maternal and newborn mortality. Coverage with key maternal interventions in the Northwest of the country is generally lower than for the country as a whole. For example, the proportion of pregnant women receiving at least one antenatal care contact from a health professional in the Northwest in 2008 was 31% compared with 58% nationally. Kano State reported 50% ANC coverage while Katsina and Zamfara states reported 14% and 13% respectively. Similarly, the proportion of women delivering with a skilled birth attendant in the Northwest region was 10% compared with the national average of 39%. The rate was 13% in Kano State and 5% and 8% respectively in Katsina and Zamfara States. Contraceptive prevalence shows similar variations, being 10% nationally and 2.5% in the Northwest Region.

Program implementation areas were selected in consultation with local State and Local Government Area (LGA) stakeholders, using a number of criteria including high levels of maternal and neonatal mortality and absence of other donor partners implementing related activities. The program initially targeted two LGAs in each state; by the end of 2011 the project had supported facilities and communities to improve quality of and demand for maternal and newborn care in 29 LGAs. All activities were closely coordinated with MOH staff, and consistent with national policies and strategies outlined in the Integrated Maternal, Newborn and Child Health (IMNCH) strategy.

¹ The 3 delays are: 1) delay in recognizing complications; 2) delay in reaching a medical facility; and 3) delay in receiving good quality care at the facility.

2. Policy/strategy adoption – early PNC home visits 2007-2011

2.1 Process of introduction

In response to continued high rates of under-five, newborn and maternal mortality in Nigeria the MOH developed an Integrated Maternal, Newborn Strategy and Child Health Strategy (IMNCH) in 2007². The intention of the strategy was to better integrate activities at all levels in order to avoid duplication and to improve program effectiveness. It outlines key interventions along the continuum of care for the mother and child and approaches to improving intervention coverage. The strategy includes a focus on PNC interventions and early PNC contacts, although it does not specify that these should be provided by home visits. It recommends that States each develop their own approaches to improving PNC contacts based on the local system and barriers to access. To date 24 states out of 36 and the Federal Capital Territory (FCT) have begun implementing activities based on the IMNCH. However, progress with implementation is highly variable between and within States. The main limitation of the IMNCH strategy is that it does not provide information on some key technical areas, including essential newborn care, kangaroo mother care and newborn resuscitation; in addition little attention is given to community-based strategies for better reaching mothers and children at home.

In order to outline an approach to implementing maternal and newborn health activities, the MOH, Save the Children (SC) and other partners developed an action plan in 2009 (*Saving Newborn Lives in Nigeria: Situation Analysis and Action Plan for Newborn Health*³). The intention was to provide a more comprehensive understanding of newborn survival and health in Nigeria, to analyse the relevant data by State and to present concrete steps to accelerate action to save newborn lives in the context of the IMNCH strategy. It highlighted the need to focus on maternal and newborn health along the continuum of care. A second edition of this report in 2011 included updated national and state-level data profiles in line with the global Countdown to 2015 for Maternal, Newborn and Child Health process; a new chapter on maternal, newborn and child nutrition; updated recommendations; and a renewed call to action, including letters of commitment from key stakeholders in maternal, newborn and child health in Nigeria⁴. These reviews highlight a number of system barriers to improving access to and demand for MNCH interventions, including: high out-of-pocket health expenditures and limited coverage of the national health insurance scheme; relatively low central government allocations to health; lack of key human resources in areas where they are most needed; and a relatively limited focus on improving household and community demand.

Other policy documents recommend early PNC care including, the National Reproductive Health Policy and Strategy (2001), the National Child Health Policy (2006) and The Roadmap for Accelerating the Achievement of MDGs Related to Maternal and Newborn Health (2006).

² Federal Ministry of Health. Integrated Maternal, Newborn and Child Health Strategy. Abuja; 2007.

³ Federal Ministry of Health. Saving newborn lives in Nigeria: Newborn health in the context of the Integrated Maternal, Newborn and Child Health Strategy. Abuja: Federal Ministry of Health, Save the Children, ACCESS; 2009.

⁴ Federal Ministry of Health. Saving newborn lives in Nigeria: Newborn health in the context of the Integrated Maternal, Newborn and Child Health Strategy. 2nd edition. Abuja: Federal Ministry of Health, Save the Children, Jhpiego; 2011.

2.2 Content of policy/strategy

National level

The IMNCH strategy recommends early PNC contacts for both the mother and the child. The newborn health action plan recommends that PNC contacts take place as early as possible; 3 visits in the first 7 days of life (day 1, 3 and 7) are recommended. Home visits are recognized as important. A national policy has not yet been developed on who should provide PNC in the community, the most feasible timing of PNC visits and the intervention package to be delivered; the newborn health action plan recommends further operations research on models for providing community-based PNC home visits. The current approach has been to allow smaller-scale testing of different approaches in the country, in order to gather data on what approaches are most effective.

Project areas

In project areas an approach to PNC was developed in collaboration with State and LGA MOH staff. In these areas it was decided to allow Female Household Counselors (FHC) to provide early PNC home visits. The standard guidelines recommend that FHC identify pregnant women and then conduct home visits as shown in the box below – 2 during pregnancy, 2 in the first week after delivery with the first visit recommended as early as possible after delivery, and at 3 and 6 months. Mothers and newborns are screened at the same time. The training package includes 5 of the 7 core competencies recommended by WHO and others in order to deliver key maternal and newborn interventions⁵. Competencies not included are breastfeeding support and care of low birth weight babies. Babies identified as being small are referred to facilities for further management. Volunteers counsel mothers on key messages, and refer for both ANC and PNC at first-level health facilities.

Female Household Counselors – Home visit schedule

During pregnancy: Two home visits

- Pregnancy visit 1: as soon as pregnancy is confirmed
- Pregnancy visit 2: about two months before delivery

After birth: If birth weight is normal, three home visits :

- Postnatal visit 1: as soon as possible after the birth
- Postnatal visit 2: in the first 7 days
- Postnatal visit 3: 3 months
- Postnatal visit 4: 6 months

Low birth weight babies are referred to PHC facilities for further management.

⁵Core PNC competencies: Promotion of NB care (early/exclusive BF, warmth, hygiene); Promotion of optimal care for mother (nutrition & family planning); Promotion of care-seeking for mother & newborn; Identification of danger signs in mother + referral; Identification of danger signs in newborn + referral; Support for breastfeeding; Care of low birth weight infant (feeding, skin-to-skin contact)

2.3 Supporting policies/strategies

Several policies support the implementation of early PNC home visits for mothers and newborns, including:

- A policy on facility-based deliveries by skilled providers. This policy is outlined in the National Reproductive Health Policy and Strategy (2001). Skilled providers in Nigeria include: doctors, nurses, and midwives.
- Introduction of the Kangaroo Mother Care (KMC) approach. KMC was first introduced in Nigeria in the late 1990's by a resident pediatrician at the University of Lagos Teaching Hospital, who conducted a study on the use of the skin-to-skin approach with Nigerian babies; findings were published in the Nigeria Journal of Pediatrics. Subsequently a training workshop was held with doctors and nurses from 16 teaching hospitals across the country. In 2007 ACCESS supported the introduction of KMC in selected facilities in Kano and Zamfara States. The program facilitated the development of a 'Kangaroo Mother Care Training Manual' adapted to the needs in Nigeria, in collaboration with the Federal Ministry of Health (FMOH-Nigeria). A training of 12 trainers (TOT) was conducted, with six trainers each from King Fahad Well Women and Children's Hospital in Zamfara and Murtala Mohammed Specialist Hospital (MMSH) in Kano. Health providers trained included Heads of Department of Obstetrics/Gynecology and Pediatrics, Chief Nursing Officers (CNO) or matrons, nurse midwives in charge of maternity and pediatric units (labor ward, postnatal ward, postnatal clinic and special care baby unit) and the Reproductive Health Coordinators from the State Ministries of Health in both States. Following the TOT, KMC areas were established and equipped in both hospitals. Training of additional staff in these hospitals as well as other selected facilities in Kano, Zamfara and Katsina States has subsequently been conducted.

Nationally there are currently no KMC policy or service guidelines for KMC. These are needed in order to develop an implementation plan for national adoption.

- Nigeria midwives service scheme. The midwives service scheme (MSS) is a national initiative to address gaps in midwife staffing at primary health care facilities. It is implemented by the National Primary Healthcare Development Agency (NPHCDA). The scheme deploys midwives to health facilities in rural areas. Midwives included in the scheme include recent midwifery graduates (recent graduates must complete at least one year of rural placement in order to be licensed to practice midwifery), unemployed midwives and retired midwives. So far more than 2600 midwives have been deployed to 652 primary care facilities. The scheme has been established in 18 health facilities in ACCESS/MCHIP supported sites (9 hospitals and 9 PHCs). MCHIP has provided training manuals, job aids and posters to the program. As part of the scheme, midwives receive training in life saving skills, IMCI and other elements of pre-natal, delivery and post-natal care. The scheme also includes resources for improving availability of essential equipment and supplies to support safe deliveries at first-level health facilities. It is hoped that this approach will improve availability of skilled delivery care services.

- The National Health Bill. The National Health Bill has not yet been signed into law. The Bill, when finalized, will provide 2% of GDP for funding the PHCs nationwide. The funds will be used to provide health insurance coverage and for infrastructure, purchase of essential drugs and consumables, and development and maintenance of the Health Management Information System. These increased resources would improve the provision of all primary health care services, including PNC.

Lessons learned: Adoption of the PNC home visit strategy

- The WHO/UNICEF Joint Statement on PNC home visits proved to be a useful guide when deciding on the PNC policy.
- In order to begin implementing the PNC approach a national action plan is useful – which articulates the guidelines and approaches to implementation. In Nigeria this plan was developed and reviewed by the MOH and partners – which helped ensure that it was accepted.
- In the early phase of implementation of the PNC home visits, the strategy should include clear guidelines on an approach to community-based activities – including staff who are responsible and practice guidelines.
- In Nigeria implementation is planned and coordinated by States and Local Government Areas (LGAs) within States. In ACCESS/MCHIP project areas it was critical to work collaboratively with staff at these levels and to develop the approach used locally with them.
- Documentation of experience and lessons learned from early implementation is important to developing approaches that will allow the PNC home visit approach more widely.

3. Selection and training of Female Household Counselors (FHCs)

3.1 Characteristics of FHCs

In project areas the PNC home visit approach is implemented by FHCs. Criteria for selection of FHCs include:

- Female
- Live in the village where they are work
- Preferably be able to read and write
- Available to conduct home visits
- Respected in the community

FHCs are selected by health workers responsible for community health at the local health facility as well as community mobilization teams (CMT) and community core groups (CCG). Heads of households are also consulted and have to agree for particular counselors to be selected.

Volunteers must commit to being available to conduct regular household visits. FHCs receive 5

days basic training in CMNH. On average FHCs are responsible for 1000-1500 households. In Kano the HH counselor to population ratio was estimated at about 1:700 for the catchment areas selected. In Zamfara the HH counselor to population ratio was initially estimated at 1:5100 but this was found to be too high – and was reduced to around 1000 households per FHC. FHCs record all pregnant women and home visits in a community register – data from the register are summarized each month and submitted to Junior Community Health Extension Workers (CHEWs) – who are their supervisors. Each FHC receives a kit containing essential equipment and supplies (see section 4.2).

As a first step, FHCs do community mapping to identify households with pregnant women. Mapping is repeated every 3 months. Pregnant women are identified within the community through traditional birth attendants (TBAs), heads of households and through community gatherings and ceremonies, e.g. weddings. The households with pregnant women to be counseled are equally divided amongst local counselors. Pregnant women are entered into a household register, which is used to track visits made before and after pregnancy. Initially each household counselor was allocated 20 household visits per week. However this proved difficult for volunteers, particularly in areas with longer distances between households. The number of daily household visits that FHCs could make varied between 6 and 12 per week, or approximately 24 to 48 visits per month. During the home visits, FHCs introduce themselves to the heads of households and pregnant women, and then provide information and counseling. Emphasis is made on focused antenatal care (FANC) at the first and second antenatal visits. They also counsel women on pregnancy danger signs, birth preparedness and delivery at a health facility, healthy timing and spacing, immediate and exclusive breastfeeding and related benefits, postpartum danger signs, postnatal care visits and newborn danger signs. After the first ANC visit, the expected date of delivery is calculated, in order to determine when PNC visits should take place. The two PNC visits take place in the first 7 days after delivery.

FHCs are not paid, although it was recognized that they needed incentives in order to remain motivated. The project began paying a small stipend for their monthly reviews at health facilities – which covered the costs of food and transportation. In a few LGAs local government began paying volunteers a small stipend.

Lessons learned: FHCs

- FHCs are well received by pregnant women and their families, traditional birth attendants (TBAs) and community leaders. Heads of households/husbands are also reported to be very supportive of counseling. Pregnant women report that they find the information given during counseling to be valuable. Because volunteers are local women, they are well accepted.
- FHCs appear to be able to complete all counseling tasks without difficulty, including counseling using counseling cards and home visits. In some areas illiterate FHCs have had difficulty completing registers.
- Because they do not have other program responsibilities, FHCs generally have enough time for home visits. They should not be allocated more than about 1000 households – on average they can complete between 24 and 48 household visits per month.

- Some incentives are important in order to sustain the motivation of FHCs. Although they are generally motivated by non-financial rewards, monthly meetings with supervisors, including a small stipend to provide costs of travel and meals, have proved useful.

3.2 Training of FHCs

Counseling messages and materials were reviewed and adapted for local use in collaboration with State and LGA MOH staff. Messages and materials were translated into Hausa and field tested. Training materials were adapted from those developed and used by ACCESS in Bangladesh. A cascade method of training has been used. At the State level, Community Health Extension Workers (CHEWS), nurse midwives and high-performing volunteers were trained as trainers. These staff, in collaboration with ACCESS/MCHIP Community Mobilization Officers, Program Officers and Strategic Implementation Officers, subsequently coordinated training at the LGA level. The basic training is 5 days in duration; it includes participatory methods, including role plays – field practice is not included. The first 3 days of the training focus on ANC, delivery and PNC messages – and on methods for identifying and following pregnant women and for completing registers. The last 2 days focus on post-partum family planning. The training was conducted in both Hausa and English to help with understanding. Following training, project supported Community Mobilization Officers make field visits to trained staff to observe practice on the ground; problems with identifying pregnant women or counseling are reviewed and solutions found. In some cases, more experienced volunteers were paired with new volunteers in order to give them on-the-job mentoring. All training costs have been covered by the project.

Lessons learned: training

- Cascade training has worked well because of the presence of dedicated ACCESS/MCHIP staff at the State and LGA level (Community Mobilization Officers, Program Officers and Strategic Implementation Officers). These staff have taken responsibility for training and have developed local training plans.
- The training materials appear to be appropriate for the education level of FHCs. In general the training gives them the skills they need to do their job effectively. The counseling cards are clear and easy to use. Literate FHCs report that community registers are clear and easy to complete. Problems reported by FHCs in the field include: difficulty determining the expected date of delivery; some difficulties completing registers and monthly summary forms; and occasional problems or errors in counseling messages. Most of these have been managed using on-the-job training and supervision.
- Follow-up after training by Community Mobilization Officers has been essential for solving problems.
- Training costs are currently paid by the project. In the longer term a mechanism for supporting training costs through routine State and LGA budgets is needed.

4. Implementation

4.1 Training coverage

FHC training began in early 2007. The original number of FHCs required to provide household visits for the LGAs selected by the ACCESS project was estimated at approximately 450 for Kano and 340 for Zamfara⁶. Resources were not available to train this number, however, and so FHCs were not deployed throughout LGAs, but in catchment areas of selected facilities. Using this approach the HH counselor to population ratio in Kano was estimated at about 1:700 for the catchment areas selected. In Zamfara the HH counselor to population ratio was estimated at 1:5100. The ratio in Zamfara had to be reduced to around 1000 households to make it feasible to reach all households, especially in catchment areas that required walking long distances between households.

In Zamfara State, the 43 FHCs were selected from two LGAs. Within the LGA, 28 FHCs covered a catchment area of 3 PHCCs, and 15 covered the catchment area of one general hospital. Two counselors later dropped out and the 41 remaining were redistributed. There are now 21 counselors in Gusau LGA and 20 in Kaura Namoda LGA. In Kano State 42 trained counselors were distributed at two PHCCs, one each in the LGAs selected for program implementation (Dawakin Tofa and Gezawa). Each PHCC had 21 HH counselors attached to it, working in the facility catchment area. Overall, a total of 85 FHCs were trained.

4.2 Trends in coverage indicators in project areas: 2006-2010

Before and after household surveys were conducted in project areas in December 2006 and November 2009, after 3 years of project implementation. Surveys used a cross-sectional pre-and post-intervention design. The surveys were conducted in the four start-up LGAs in Kano and Zamfara: Dawakin Tofa and Gezawa in Kano and Gusau and Kaura Namoda in Zamfara. A multi-stage sampling procedure was used to select eligible women, starting with a random selection of five enumeration areas (EAs) from each of the four target LGAs. Women who had a live birth in the previous 12 months were sampled.

During the intervention period, the project had implemented the following key activities:

1. Supported 57 health facilities (27 general hospitals, 5 comprehensive health centers and 25 primary health care centers) in 29 LGAs to provide quality maternal and newborn care services. ACCESS trained 115 skilled birth attendants from its supported facilities and 242 NYSC doctors to provide emergency obstetric and newborn care. By June 2009, the trained skilled birth attendants had managed 332,308 antenatal care visits, delivered 62,306 women, provided active management of third stage of labor (AMTSL) to 47,862 women (76.8% of vaginal deliveries), used the partograph to monitor 22,329 women in labor and provided essential newborn care to 41,352 babies.

⁶ Calculated based on 1 volunteer per 1,500 population and an estimated 75 pregnancies/year (estimating a CBR of 50/1000). LGA populations estimated at: 1) Dawakin Tofa: 635,096; 2) Gezawa: 627,732; 3) Gusau: 500,000; and 4) Kaura: 370,867.

2. Established national and state performance standards for emergency obstetric and newborn care services in hospitals and PHCs. Staff were trained in standard case management using these guidelines in 30 out of the 57 project supported health facilities. Increased compliance with EmONC performance standards was demonstrated in the first batch of 11 health facilities. Follow-up assessments were conducted after training. Mean performance scores in six project supported hospitals rose from 12% at baseline to 49% at the first follow-up and 84% at the second follow-up assessment, while the mean scores at PHCs also rose from 1.0% at baseline to 21% at the first follow-up and 62% at the second follow-up assessment.
3. Worked to generate increased demand for MNC services at health facilities and improve home preventive and care practices. Sixteen community mobilization teams (CMTs) and 50 Community Core Groups (CCGs) were established in communities in catchment areas of target facilities. Eighty-five FHC volunteers were trained to make home visits in pregnancy and in the post-natal period and to provide counseling in key areas using flip charts and other health education materials.
4. Provided essential equipment, supplies and infrastructure. The project contributed to renovation of 12 facilities, supplies essential materials and equipment for clinical services, developed and supplied counseling materials, developed and funded all training materials and training activities, and provided key staff at the LGA level who assisted local MOH staff to plan, implement and supervise activities on the ground (ACCESS/MCHIP Community Mobilization Officers, Program Officers and Strategic Implementation Officers).

Trends in knowledge and practice indicators from household surveys 2006, 2009

Coverage indicators along the continuum of care are summarized in Figure 1.

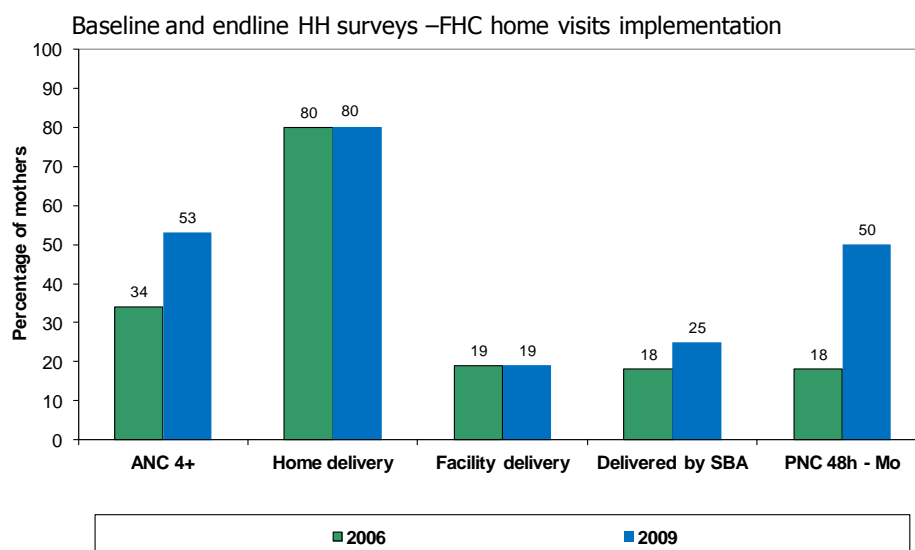
ANC

The proportion of women who had at least one ANC visit during their last pregnancy rose from 42% in 2006 to 74% in 2009. The proportion of women receiving 4 or more ANC visits also rose during this period, from 34% to 53%. The mean number of months of pregnancy at which ANC was first sought did not change over time and remained around 4.8 months – women tend to make their first visit after the first trimester. The principal sources of ANC were government hospitals, government PHCs and government dispensaries. In 2009, a higher proportion of women reported visiting PHCs (26%) than in 2006 (14%) – suggesting that demand from PHCs has increased. The most frequent providers of ANC were nurses or midwives, doctors and CHEWs; this did not change over time.

A number of elements of ANC were received more often in 2009 than 2006, in particular receiving anti-malarial drugs (62% 2006 – 90% 2009) and a number of counseling tasks, including counseling on exclusive breastfeeding (64% 2006 – 84% 2009), and information on benefits of family planning (62% 2006 – 85% 2009). The proportion of women receiving birth preparedness messages also showed improvements.

Overall the number of ANC visits and quality of ANC showed improvements over time suggesting improvements in both demand for care and knowledge and practices of health workers.

Figure 1: ANC, Delivery and PNC Practices, ACCESS Project Areas, Kano and Zamfara States, Nigeria, 2006 and 2009



Delivery care

Very little change was noted in the proportion of women delivering at home between 2006 and 2009. In 2009 the vast majority of women (80%) delivered at home; only 19% delivered at a healthcare facility: 17% at government hospitals and 2% at government PHCs. These rates are unchanged from 2006, and findings from the project LGAs are only slightly better than the Northwest Region as a whole where 90% of all births are delivered at home (DHS 2008). A slightly higher proportion of women were delivered by a skilled provider (doctor, nurse/midwife, clinical officer) in 2009 compared to 2006 (25% vs. 18%). The majority were attended by unskilled provider, including TBAs, relatives/friends, community health workers, mothers/mothers-in-law, elderly family members or self. Women with two or more children, no formal education, who were illiterate, or resident in rural areas were more likely to give birth at home.

Among respondents who gave birth at home, the majority (56% in both 2006 and 2009) did so because they believed that it was not necessary to go to a facility. About one-half of women (47%) did not give birth in a health facility because their husband/family did not think it was necessary. Other reasons for not going to a health facility included: “no time to go” (45%), “facility too far” (15%), and “no transportation” (12%). The 2009 survey sought to know what was used to cut the cord at the delivery of the last baby. A vast majority of the women (83%)

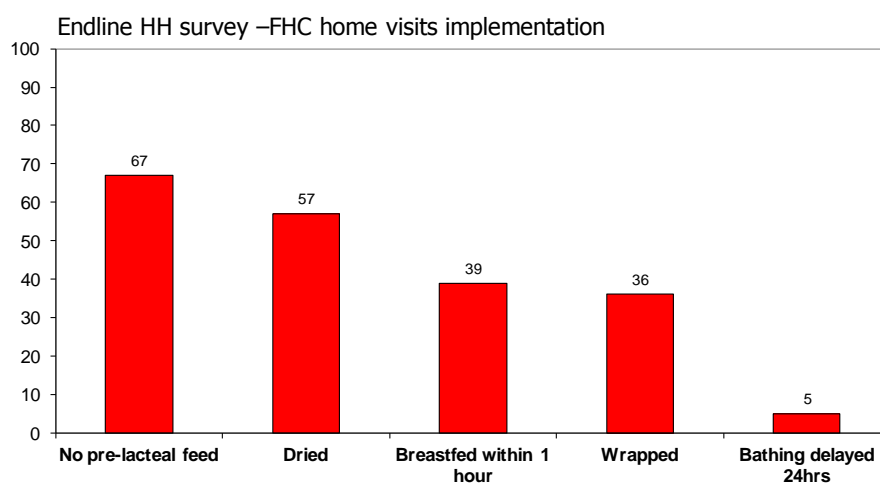
reported that a new blade was used. An “old blade in the house” was used in only two of the cases, and “bamboo strip” in one case. Fifty-seven percent of women reported that nothing was applied to the umbilical stump after cutting; and 39% reported that they had applied something to the stump.

Overall, these findings suggest that it remains extremely difficult to change delivery practices in these areas for a number of reasons, in particular social and cultural attitudes and beliefs about where delivery should take place. In this area, local counseling and behavior change activities, and improvements in the quality of delivery care at local facilities, have had little impact on practice.

Newborn care

Newborn care practices were examined in the 2009 survey. Fifty-seven percent of women reported drying the baby, 36% wrapped the baby with clean cloth/’katha’ and 5% kept the baby on bare skin to skin contact with the mother. Only 39% of the babies breastfed within the first hour of birth. About one-third of the women (33%) reported that the baby was given some other food or liquid before starting breastfeeding. The first bath was delayed more than 24 hours after delivery in only 5% of cases, with 64% reporting that the baby was bathed immediately after birth; and 30% during the first day. Overall key newborn practices continue to need improvement. Newborn care practices at endline are shown in Figure 2.

Figure 2: Newborn Care Practices, ACCESS Project Areas, Kano and Zamfara States, Nigeria, 2009



Postnatal care

The proportion of women having any PNC contact more than doubled between 2006 and 2009 – rising from 23% to 55%. PNC contacts within 2 days of delivery rose from 18% in 2006 to 50% in 2009 – an encouraging trend. Around 50% of all PNC checks were reported to have taken place within hours of delivery. Since only 20% of women reported delivering at a health facility, the majority of PNC contacts required women to seek PNC from a facility. Missed opportunities to screen newborns as well as mothers were noted in 2009, with mothers reporting that 45% of newborns received a PNC check – 10% of newborns were therefore not screened at the same time as their mothers.

Of those women receiving a PNC check in 2009, 55% received it from a nurse/midwife, 22% from a community health worker and 20% from a doctor. In 2006, a similar proportion were checked by doctors, but a much lower proportion received care from a community health worker (9%) and a higher proportion from a nurse/midwife (74%) – suggesting increased involvement of community health workers in PNC in project areas.

Some key PNC practice tasks were examined. Improvements were noted between 2006 and 2009 in the proportion of women receiving a dose of vitamin A (33% 2006; 50% 2009), iron tablets/syrups (85% 2006; 88% 2009) and counseling on LAM (46% 2006; 60% 2009). Other counseling tasks showed no improvements. The proportion of women who reported that they received a physical examination as part of the PNC check actually fell in 2009 (85% 2006; 79% 2009). Overall there are some improvements in performance of PNC tasks, suggesting that clinical training and supervision may have had some impact on quality of PNC provided.

Lessons learned: implementation data in project areas 2006-2009

- Improvements were noted in coverage and quality of ANC.
- Improvements in coverage with early PNC and some elements of quality of PNC were noted, even though deliveries with a skilled provider remain limited.
- Limited improvements in the proportion of women delivering with a skilled provider or at a health facility were noted; despite intensive inputs at both the facility and community levels. This finding reinforces the strong cultural and social norms which continue to promote home deliveries.
- Early newborn practices continue to need improvement – particularly early and exclusive breastfeeding and delayed bathing.

4.3 Program activity areas

4.3.1 **Community home visits**

Survey data

The end-line household survey in project areas asked women about home visits from community health workers. Findings include:

- About one-half of the women (54%) reported that a community health worker visited them in their home during their last pregnancy; 46% of the women were not visited by any community health worker during pregnancy. About 16% of women were visited once by an FHC before the birth of their baby, 22.3% were visited twice and 9.3% were visited three or more times.
- About 47% of women reported that a community health worker visited their home after delivery to check on the baby (49% in Kano and 46% of Zamfara). Most of health workers who made home visits were FHCs (86%). About 15% percent of women were visited once in the first week of delivery, 21% twice and 6% more than twice.

Summary of findings

As mentioned in section 3.1, FHCs were able to make between 6 and 12 counseling visits a week. Methods for identifying pregnant women varied and included: using key informants to identify pregnant women; and using both key informants and house-to-house visits. Using estimates of population size and crude birth rate, it was determined that about half of the number of expected pregnant women were identified when the key informant approach was used – the combined approach identified closer to the expected number. It was noted that less literate FHCs often needed assistance to complete registers – in many areas they made joint home visits with literate FHCs. This resulted in inefficiencies – and reduced the number of pregnant women who could be seen each week. It was noted that pictorial recording forms would be easier for less literate FHCs to complete. In areas where less literate FHCs made home visits on their own, inaccuracies in recording were noted; quality of data in these areas remains uncertain. As a related point, it was noted in some areas that there were differences between the number of home visits reported by FHCs and the number recorded in registers – which may also be due to difficulties with recording of information.

Approximately half of women registered as pregnant received home visits during pregnancy and in the PN period. This finding highlights the continued difficulties getting FHCs to houses, particularly after delivery. Initially it was noted that FHCs had difficulty initially calculating the expected day of delivery, in order to calculate when PNC visits should be made. It was reported that early notification of delivery was often difficult and therefore that early PNC visits are often not taking place. Getting to remote or more isolated households was a problem in some areas; FHCs often did not have transportation available or a fare for public transportation. In some LGAs local government was able to provide a small amount of funds for transportation costs – although this was not possible in most.

Lessons learned: community home visits

- Approximately half of all women in project areas report receiving a home visit from an FHC during pregnancy and in the post-natal period.
- FHCs are able to make 6-12 household counseling visits per week.
- The most effective method of identifying pregnant women used a combination of both key informants and household visits by FHCs.
- Illiterate FHCs had difficulties completing registers and sometimes needed assistance. In the future either all FHCs should be literate or alternative pictorial recording forms should be considered.
- Reaching households in the early postnatal period remains difficult for FHCs for a number of reasons, including: difficulties calculating the expected date of delivery; limited systems for notifying FHCs of deliveries; and difficulties reaching households in more remote areas.

4.3.2 Health promotion and behavior change

Survey data

Household survey data on knowledge of women before and after project implementation show that:

- The percentage of women who could identify at least four danger signs across the four periods of analysis (pregnancy, labor and delivery, postpartum and newborn) was significantly higher at endline (from 53% at baseline to 80% at endline). Urban women, women with six or more births, those who were educated/literate, and those lived in Kano State were more knowledgeable than others.

At endline 91% of respondents knew to dry and wrap the baby immediately, 65% knew to practice clean cord care and 41% knew to breastfeed within one hour of birth. The corresponding figures at baseline were 73%, 63% and 27% respectively.

- At endline 84% of women had heard about birth preparedness relative to 47% at baseline.
- About 68% of the women reported making any birth preparedness arrangements at endline; only 32% of respondents did so at baseline. The most common arrangement was saving money for birth at a facility or an emergency (93%), identification of a skilled provider (45%) and identification of a means of transportation (40%).

- About 58% of respondents knew about a committee or group in the community working towards improving the health of pregnant women and their babies.
- The three most frequently reported issues that committees or groups addressed were identified as : mother's health (95.2%), baby's health (92.4%), and family planning (63.2%).
- Among women who knew about community committees or groups, 24% said they received some help from them. The most frequently reported assistance offered by community committees or groups were: health talks (62%); transport support (22%) and financial support (12%).

Taken together these data suggest that community-based health education and mobilization activities improved knowledge in several key areas. Although improvements of ANC and PNC coverage were noted at endline – knowledge changes did not result in major changes in the proportion of women delivered by a skilled provider or delivering at a health facility.

It was reported that FHCs were well accepted by pregnant women and their families, and also by the community leaders and elders including traditional birth attendants (TBAs). Pregnant women report that they appreciate the information given to them. In some areas household counselors received a small token from women counseled after a safe delivery. Simple counseling materials using local terms and expressions were reported to be effective. CHEWs reported that in the early stages of implementation, after the first round of training, FHCs sometimes needed coaching on appropriate counseling skills to ensure that they adhered to standard messages.

Community-mobilization was an important element of project activities. ACCESS/MCHIP has worked with LGA MOH staff to establish 16 community mobilization teams (CMTs) and 50 Community Core Groups (CCGs) to implement a 3-pronged community mobilization strategy: group discussions, household visits and use of a variety of information, education and communication (IEC) print and audio materials. The project established community mobilization training teams at the LGA level which included Community Mobilization Officers (a project-specific cadre) as well as local government staff from health and education. The teams were responsible for establishing community core groups in villages. The CMTs and CCGs have been very active in mobilizing communities and political leaders for facility improvements and behavior change – and for supporting FHCs. For example, they have secured donation of ambulances, water tanks, client benches, antenatal medications, procurement of insecticide treated nets, and renovation of staff quarters. Support from husbands, ward and district heads, imams, other community leaders and community members was important for reinforcing key messages.

Lessons learned: health promotion and behavior change

- One-on-one counseling was an effective behavior change approach; relatively uneducated FHCs were able to conduct counseling effectively and use counseling materials when written in the local language.

- FHCs were well effective because they were from the community and respected by community members.
- Involvement of a number of influential members of the community, including ward and district heads, imams and husbands was important for reinforcing key messages.
- Community mobilization using core groups and community mobilization teams proved to be important for raising awareness of maternal and child health, and securing community inputs in a number of areas.

4.3.3 Supervision and monitoring

Supervision

FHCs were supervised by project supported Community Mobilization Officers who initially visited FHCs every week. They later trained 2-3 FHCs in their catchment area who took on the role of regular supervision of FHCs in their own areas. Community Mobilization Officers in collaboration with CHEWs were also responsible for conducting monthly meetings with FHCs in their catchment areas. Monthly meetings proved to be the most useful method for discussing progress with FHCs and solving problems. The project began paying costs of meals and transportation for FHCs to attend monthly meetings. Monthly meetings were used to collect register data and organize visits to pregnant women for the next month – dividing households between FHCs. In addition, problems were identified and solved when possible.

Monitoring was conducted using 2 methods: 1) community registers completed by FHCs; 2) attendance boards in primary health care centers, to track the number of women coming for ANC, delivery and PNC. No data from community registers were available at the time of the review. Register data were recorded on a summary form for each month by CHEWs. Forms were submitted to project Strategic Implementation Officer at the LGA level, and then to the project M and E Officer in Abuja – the M and E Officer was responsible for entering data into a database and generating summaries of data. Summaries were sent back to CHEWs for discussion with FHCs – and to highlight achievements or gaps in follow-up of pregnant women. The system ran parallel to the routine HMIS; and data were managed by project staff. It was reported that community register data were not always used for local planning very effectively – as mentioned above it is not clear whether PNC visits were being made systematically – ANC visits tended to be made more often. Since collection and synthesis of data was a responsibility of the project, it remains unclear whether this has continued when project support finished. Recording attendance data in health facilities was designed to improve awareness of contacts along the continuum of care – and to reinforce this message with both facility staff and FHCs.

Lessons learned: supervision and monitoring

- Monthly meetings proved to be the most useful approach to supervision. Monthly meetings allowed problems to be discussed, plans for home visits to be made for the next month, and

community register data to be collected. A small stipend to cover meal and transportation costs was an important motivator.

- Data from community registers were synthesized each month and reports sent back to CHEWs. All data collection was managed by project staff who will not be present when project funding ceases.
- The community register-based data collection system runs parallel to the routine HMIS.

4.3.4 Equipment and supplies

FHCs were provided with a bag, *hijab*, T-shirt and caps – all with the Program logos. They are also provided with Household Counselors Home Visit Registers, counseling flip charts, health cards for women, referral forms and pregnancy calculators. All equipment and supplies were purchased and supplied by the project – and stock outs were not a problem during the life of the project. Local budgets have not yet been used to purchase equipment and supplies

Lessons learned: equipment and supplies

- Basic equipment and supplies are essential for supporting FHCs practice and act as motivators.
- In order to be sustainable in the longer term, all equipment and supplies will need to be purchased and distributed by States and LGAs.

4.3.5 Care-seeking

Care-seeking remains a problem in all areas for several reasons, including: lack of vehicles, lack of money to pay for fuel or transportation, distance and concerns about the quality of care at facilities. Two States have an emergency transportation system, in which volunteer drivers are identified who will be available to transport women and children as quickly as possible to referral hospitals; they are paid from community funds in cash or in-kind. FHCs are given a referral notebook during training, and asked to record all patients referred to facilities; in addition they are asked to accompany mothers and children to the facility themselves. No data were available at the time of the review on the proportion of women/children accompanied by FHCs. Use of a notebook is designed to reinforce the importance of referral, and to allow supervisors to review whether cases referred reached referral sites – and to further follow-up these cases if necessary. As discussed in section 4.2, the number of women going to facilities for preventive services before and after pregnancy – ANC and PNC – showed improvements during the project. In addition, mothers knowledge of danger signs for seeking care for themselves and their babies also showed improvements. A total of 27 women at baseline (7%) said they experienced a serious health problem during the two days after birth, including bleeding, headache, blurred vision, swollen hands/face and difficulty breathing. At endline 55 women (13%) reported a serious health problem. About 78% of these women sought medical assistance compared with 68% at baseline. Those who did not seek assistance thought it was not necessary or used home-made remedies. These data suggest small improvements in recognition of danger

signs and care-seeking during the life of the project. In the longer term, it is hoped that improved knowledge through FHC counseling will continue to improve rates of recognition and care seeking.

In addition to work on improving community demand for services, the project also worked to improve the quality of EmONC, ANC and PNC at facilities – through training, improved supervision and by improving the availability of essential facility supports such as equipment, medicines and infrastructure. A health facility assessment in 2009 noted improvements in several measures of quality of care – including health worker knowledge and practice and availability of facility medicines and supplies. Gaps remained in some areas of health worker practice, however – reinforcing the need for ongoing support and supervision. Improving quality of facility-based care is critical to improving rates of referral for ANC, skilled delivery and PNC.

Lessons learned: referral

- FHC counseling improved both knowledge of when to seek care and small increases in the proportion of women seeking care for problems in the PNC period.
- More experience is needed with the use of referral notebooks by FHCs, and to determine whether or not they are able to accompany mothers and babies needing referral to facilities.
- Community-based transportation schemes using volunteer drivers show promise in some project areas.
- Improved quality of care is essential to improving referral practices for ANC, skilled delivery and PNC.

4.3.6 State and LGA planning and management

All project activities have been implemented through State and LGA systems, in close collaboration with MOH staff. LGAs have helped coordinate training activities, supervision visits, and distribution of equipment and supplies. MOH staff were supplemented with three project-specific staff: Community Mobilization Officers and Strategic Implementation Officers at each LGA and Program Officers at the State level. These staff assisted with training and program oversight. At the end of the project period, a cadre of trained MOH FHC and community mobilization trainers was available. Training materials and health education materials in these areas had been developed for local use in the longer term. Community-based monitoring and evaluation data collected from registers were shared with LGA and State MOH staff – although data were managed by a project M and E officer, and were not integrated into the routine HMIS. In the longer term LGA and State operation budgets will need to assume responsibility for all ongoing training, equipment and supplies, monitoring and supervision activities that were project supported. The availability of other MOH and partner initiatives will also improve the ability to continue to plan and implement community-based activities including: the Midwives Service Scheme (to deploy midwives to PHC facilities nationally), the National Health Bill (which would provide a designated fund for PHC services) (see Section 2.3), as well as other donor supported MNCH project activities - the Program for Reviving Routine

Immunizations in Northern Nigeria and the Maternal, Newborn and Child Health Program (PRRINN/MNCH) – which will be operational in northern States that include Katsina, Zamfara and Kano. The PRRINN project is funded by the UK's Department for International Development (DFID) and began in 2006; the MNCH component was added in 2008 and is funded by Norwegian Aid (Norad). Both of these projects focus on strengthening systems and demand for primary care services, as well as local planning and management capacity.

Lessons learned – State and LGA planning and management

- Involvement of LGA and State MOH staff was essential in order to implement project activities successfully.
- Training capacity of staff at these levels was strengthened and materials for training and health education were developed that will be available in the longer term.
- In order for FHC and community mobilization activities to continue in the longer term, State and LGA staff will need to plan and budget for these activities. In addition, the oversight role provided by project-specific staff will need to be assumed by local staff.
- National policy initiatives as well as development partner supported projects will be important for sustaining and further developing the capacity of States and LGAs to plan, manage and implement MNCH activities on the ground.

4.3.7 Sustainability

Long term sustainability of the FHC home visits approach is promoted by:

- Ownership of the project by the MOH. Training guidelines and health education materials have been jointly developed, will continue to be used locally and are consistent with national strategies.
- A cadre of local trained staff is available to support FHC home visits – including CHEWs.
- Availability of other local partners including PRRINN/MNCHE and new national policy initiatives to increase the availability of midwives and resources for PHC.
- Strong commitment from ward and local community groups and women to continue to support MNCH and the use of volunteer counselors.

Long term sustainability of the CMNH approach may be made less likely by:

- Lack of dedicated staff. Project activities were supported by three cadres of project staff who will not be available to plan and support activities in the longer term. It is not clear whether local staff will be available to fill this role in the longer term. In particular, project staff were responsible for post-training field visits, regular supervisory visits, and monthly meetings.
- Lack of resources for community-based activities. All costs of material development and printing, training and most costs of supervision and monitoring have been paid for by the project. In the longer term, these resources will need to be found from State or LGA budgets.

Indicator Table: PNC home visit review – Nigeria ACCESS/MCHIP project areas

		ACCESS/MCHIP Project Areas – Kano and Zamfara States	
Objective/ Result	Indicator	2006	2009
IR1: Increased availability of and access to key MNC services	Proportion of mothers who received at least 4 ANC visits	34%	53%
	Proportion of mothers who received TT2+ during pregnancy	-	-
	Proportion of newborns protected against NNT at birth	-	-
	Proportion of deliveries by skilled birth attendants	18%	25%
	Proportion of deliveries at a health facility	19% Home = 80%	19% Home = 80%
	Proportion of rural pregnancies having a c-section	0.5%	1%
	Proportion of mothers who had a care contact in the first 2 days after delivery	4% - home births	
	Proportion of women with a PNC contact within 2 days after delivery	18%	50%
IR 2: Improved quality of key maternal and newborn care services	Proportion of mothers women who received iron tablets or syrup during pregnancy	90%	96%
	# of pregnant women who took 2 doses of Sp as IPT during pregnancy	62%	90%
	Proportion of babies who had the cord cut with a clean instrument	-	83% (new blade)
	Proportion of babies who were dried, wrapped immediately after birth	-	Dried – 57% Wrapped – 36%

		ACCESS/MCHIP Project Areas – Kano and Zamfara States	
Objective/ Result	Indicator	2006	2009
	Proportion of children age 0-23 months whose first bath was delayed at least 24 hours after birth	-	5%
	Proportion of mothers who initiated BF within 1 hour of birth		67%
	Proportion of babies weighed at birth	-	-
IR 3: Improved household level knowledge and attitudes for key essential newborn care and related maternal care behaviors	Proportion of pregnant women who slept under an ITN the previous night	-	-
	Proportion of newborns exclusively breastfed	—	-
	Percentage of infants age 0-5 months exclusively breastfed	-	—
	Proportion of children born in the last 5 years who were born least 24 months after the previous surviving child	—	—