Journal of Community Medicine and Primary Health Care 16 (2) 47-54

JOURNAL OF COMMUNITY MEDICINE & PRIMARY HEALTH CARE

# Utilization of maternal health services by rural Hausa women in Zaria environs, northern Nigeria: has primary health care made a difference?

**C L Ejembi,[1] M Alti-Muazu[1], O Chirdan[2], H O Ezeh[1], S Sheidu[1] and T Dahiru[1]**

[1]*Community Medicine Department, Ahmadu Bello University, Zaria.*
[2]*Department of Community Health, Jos University Teaching Hospital, Jos.*

**KEY WORDS:**

Primary health care

Progress assessment

Maternal health services

Utilization

Rural Hausa women

Nigeria

**Abstract**

**Background**: Expanding coverage, strengthening of, and increasing access and utilization of maternal health services is one of the key components of Nigeria's Primary Health Care (PHC) efforts , which was started in 1986. A descriptive study was undertaken to document the level and pattern of utilization of selected maternal health services among rural Hausa women in order to assess progress in PHC implementation.

**Methods**: A cross-sectional descriptive, quantitative study using structured interviewer-administered questionnaire was used to collect data on family planning, antenatal, post natal and delivery services utilization pattern from a total population of 655 currently married women in the reproductive age group in two predominantly Hausa villages in north-western Nigeria. The findings were compared with the baseline data obtained in the local government area at the start of PHC in 1986.

**Results**: About two-thirds of the women had heard of family planning. There were statistically significant associations between age ($P<0.001$), education ($p<0.05$), occupation ($p< 0.001$) and level of knowledge of contraceptive methods. However, utilization of modern contraceptives was very low, only 1.8% had ever used a method while 0.9% was using a method at the time of the study. Only 25.9% of the women had modern antenatal care during their last full term pregnancies with the mean age at booking of 6.6 months and an average of 5.4 visits throughout the pregnancy. There was a significant association between education and antenatal care uptake ($p <0.05$). Only 9% of their last deliveries took place in hospital while skilled attendants attended to 11% of the deliveries. The data showed a decline in most of the rates compared to the baseline data obtained for the local government at the inception of PHC.

**Conclusion**: Utilization of orthodox maternal health services among the rural Hausa women is abysmally low and PHC implementation has not made any appreciable impact on their maternal health services uptake.

## Introduction

Primary Health Care (PHC), the key for achieving the goal of health for all and, a strategy to achieving affordable universal health services coverage[1], represents one of the major health reforms in the last century.[2] The fundamental aim of PHC is to ensure universal access to available resources in order to provide adequate coverage of the most important health needs of the people. Recognizing the size and disproportionate vulnerability of women and children, maternal and child health has traditionally been given priority consideration in health planning.[3] While PHC identified maternal and child health, including family planning as one of its eight essential service components[1], it was not until 1987, with the Nairobi Safe Motherhood Conference that the magnitude of problems women go through as a result of pregnancy was brought to the fore.[4] The Safe Motherhood Initiative that resulted from the Nairobi conference articulated strategies for the promotion of safe motherhood in consonance with the principles of primary health care. Promotion of safe maternal and child health is also the emphasis of the Bamako Initiative that was articulated by the African Ministers in 1987 as a strategy for ensuring access to affordable essential drugs and restoration of consumer confidence in primary health care services through improvement in service quality.[5] In 1994, the WHO defined the

Correspondence to: Dr. C.L. Ejembi, Department of Community Medicine, Ahmadu Bello University, Zaria.

minimum care package at district (the equivalent of local government area) level; this included safe motherhood.[6]

Nigeria is adjudged to have one of the worst maternal mortality ratios in the world. With a maternal mortality ratio ranging between 800 – 1, 500/100,000 live births,[7] it is estimated that the country contributes about 10% to the global maternal mortality burden.[8] The rural areas and the northern zones of the country are disproportionately affected by the high maternal mortality and morbidity burden.[9]

Nigeria's national health policy has PHC as its foundation[10], and since 1986, the country has been reorienting her health care delivery system towards the PHC approach.[11] The thrust of PHC in the country has been to extend health services coverage to especially underserved rural populations through the expansion and strengthening of primary health care services provision at local government level and, promotion of community participation, aimed at raising awareness, harnessing local resources to augment government funding and promoting increased demand for health services.[11] Since the introduction of PHC in Nigeria, maternal and child health as a service component has received considerable attention in programme implementation.[12]

The WHO has identified the district as the operational level for PHC implementation.[6] In consonance with the WHO recommendation, Nigeria identified the LGA as the level with responsibility for PHC implementation. To ensure evidence-based planning, each LGA, as one of its first PHC activities had to conduct a situation analysis to generate baseline data for the formulation of its PHC implementation plans.[11] The PHC baseline survey for the defunct Zaria Local Government, where the study sites are located, was conducted by the Department of Community Medicine of Ahmadu Bello University, Zaria in 1986.[13]

WHO has defined a set of indicators for monitoring progress in the implementation of PHC, with literacy levels as one of the indicators for socio-economic development while contraceptive prevalence rates, ANC coverage and rates of delivery under trained attendants are identified as maternal health indicators[14] This study thus sought to find out the pattern of utilization of selected maternal health services: family planning, antenatal and delivery services in two communities in the defunct Zaria LGA and compare them with the indices generated in 1986 in Zaria Local Government in order to assess progress in the implementation of PHC in the area of maternal health in the study sites. Also, the study sought to find out the reasons for the non–utilization of allopathic maternal health services among rural Hausa women.

## Methodology

### The study location

Inhabited by predominantly Hausa/Fulani Moslems, the defunct Zaria LGA, located in the northern part of Kaduna State, in the north-west zone of the country was among the first 56 LGAs that were selected by the Federal Ministry of Health for the setting up of the PHC programme in 1986. Since the inception of PHC in the LGA, the LGA has been split into currently a total of five LGAs. One of the five LGAs is Sabon Gari LGA, the most urban of all the five LGAs.

Two rural communities, Biye and Shika Dam, both in Sabon Gari Local Government Area (LGA) were purposively selected for the study. Both communities have no pipe borne water and even though they have electricity, they are essentially rural communities. The people in the two communities are primarily subsistence farmers belonging to the Hausa ethnic group with Islam as their main religion. Early marriage of females is practiced in both communities and the married women live in subservience to their husbands and in seclusion (*Kulle);* the latter places heavy restrictions on their spatial mobility .

Biye and Shika Dam have enumerated populations of 1710 (2001) and 2,367 (2002) respectively. Each of the communities has a Local Government-supported primary health care clinic, run by a male community health extension worker. Routine maternal health clinics are not run in either facility. The villages have one trained functional traditional birth attendant each and patent medicine stores. Both communities are located within a 10-kilometre radius of both Ahmadu Bello University Teaching Hospital, Zaria/Shika and Zaria town, where there are many public and private health facilities providing a wide range of maternal health services. There are very good roads linking the villages to Zaria. Rotary International started a family planning project in 1995 in the locality and the programme has a very strong communication component.

### Methods

A cross-sectional descriptive study design using quantitative methods was used to collect data. Using interviewer-administered questionnaires, data were collected from all currently married women in the reproductive age group 10 to 49 years in the two villages. The age range was lowered to 10 years because of the high prevalence of early marriage and early child bearing observed in the environment .[15, 16] The respondents were identified from a preliminary household listing of members of each household in the villages and a

house to house survey conducted to recruit and interview the eligible respondents. Following verbal informed consent, a structured questionnaire was administered to all the eligible respondents by final year female medical students under the supervision of the authors. The questionnaire sought information on the demographic characteristics, fertility history including history of the most recent pregnancy, utilization of antenatal and delivery services for the last pregnancy, knowledge and utilization of contraceptives and possible reasons for non utilization of maternal health services from the respondents.

The data was computer analysed using EPI-INFO version 6 software. Descriptive summary statistics such as means were computed for continuous variables and proportions for nominal characteristics of the women. The Chi-square test was used to assess significance of associations between any two nominal variables with probability level set at 5%.

**Table 1: Socio-demographic characteristics of the respondents (N= 655)**

| Variable | Number | Percentage |
|---|---|---|
| **Age** | | |
| 10 - 14 | 10 | 1.5 |
| 15 - 19 | 152 | 23.2 |
| 20 -24 | 146 | 22.3 |
| 25 – 29 | 140 | 21.4 |
| 30 - 34 | 89 | 13.6 |
| 35 – 39 | 52 | 7.9 |
| 40 –44 | 44 | 6.7 |
| 45- 49 | 22 | 3.4 |
| Total | 655 | 100 |
| **Education** | | |
| None | 48 | 7.3 |
| Quranic | 552 | 84.3 |
| Incomplete Primary | 30 | 4.6 |
| Complete Primary | 16 | 2.4 |
| Secondary | 9 | 1.4 |
| Total | 655 | 100 |
| **Occupation** | | |
| Housewives | 283 | 43.2 |
| Farming | 5 | 0.8 |
| Petty Trading | 327 | 49.9 |
| Students | 40 | 6.1 |
| Total | 655 | 100 |

## Findings

A total of 655 of the 685 women enumerated completed the questionnaire giving a response rate of 95.6%. Table 1 shows the socio-demographic characteristics of the respondents. Two-thirds of the respondents were between ages 15 to 29 years with 24.7% of the respondents aged less than 20 years, including 1.5 % that were aged 10 to 14 years. Only 8.4 % of the respondents had had any formal education; however, most of the respondents, 84.3% had undergone Quranic education. Petty trading was the major occupation practiced by 49.9% of the women; only 5% of the women were engaged in farming, while 43.2 % were not engaged in any income generating activity.

**Table 2: Methods of contraceptives known to respondents**

| Method | Number | Percentage |
|---|---|---|
| Oral pills | 184 | 28.9 |
| Injectables | 151 | 23.1 |
| IUCD | 37 | 5.6 |
| Condoms | 95 | 14.5 |
| Norplant | 0 | 0 |
| Female sterilization | 25 | 3.8 |
| Male sterilization | 8 | 1.2 |
| Abstinence | 90 | 13.7 |
| Rhythm | 54 | 8.2 |
| Traditional methods (charms/rings/herbs) | 90 | 13.7 |
| Do not know any method | 353 | 53.9 |

### Knowledge and utilization of contraceptives

Sixty five per cent (425) of the women had heard of contraceptives. Radio was the predominant means of contraceptive information for 61.4 % of the 425 women that have heard of a method. Other important sources of information were friends, 40.5%, health workers, 24.7%, and relations, 23.8%. Husbands were the sources of contraceptive information for only 2.5%of the women.

When the 425 women who indicated awareness of family planning were asked to mention, without prompting, the different contraceptives methods they knew, oral contraceptives and injectables were the most common methods mentioned by 43.3 % and 35.6% of the women respectively. Only 22.5% mentioned condoms as a contraceptive method. (Table 2). Of the 425 that were aware of family planning methods, the proportion of those who could mention only one, two and three or more methods were 43.2%, 26.7% and 7.0% respectively. The remainder (23.1%) were unable to name any method. The level of knowledge of contraceptives was significantly associated with age ($X^2$ = 87.3, df = 9 and p<0.01), education ($X^2$=

19.8, df= 6 and p<0.05) and occupation ($X^2$ = 85.5, df = 6 and p< 0.001)

**Table3: Reasons for non-utilization of contraceptives, antenatal care and hospital delivery services ***

| Reason | No. | % |
|---|---|---|
| **Contraceptives** | **n= 551** | |
| Ignorance | 230 | 41.7 |
| Husband's refusal | 103 | 18.7 |
| Have not completed family | 97 | 17.6 |
| Do not believe in it | 85 | 15.4 |
| Against religion | 56 | 10.2 |
| Cannot afford it | 58 | 10.5 |
| Don't know where to obtain it | 25 | 4.5 |
| Do not know best method | 21 | 3.8 |
| Fear of side effects | 15 | 2.7 |
| Others | 40 | 7.2 |
| **Antenatal care** | **n= 427** | |
| Not considered necessary | 183 | 42.9 |
| Husband's refusal | 154 | 36.1 |
| Not aware of service | 153 | 35.4 |
| Health worker's attitude | 93 | 21.7 |
| Cannot afford it | 69 | 16.2 |
| Others | 98 | 23.0 |
| **Hospital deliveries** | **n= 524** | |
| Cultural unacceptability | 194 | 37.0 |
| Hospitals too far | 191 | 36.5 |
| Hospitals too expensive | 186 | 35.4 |
| Hospital staff not friendly | 97 | 18.5 |
| Do not consider it necessary as delivery Normal | 79 | 15.1 |
| Others | 27 | 5.2 |

*Responses are not mutually exclusive

Only 2.1% (14) of the women had ever used any family planning method and, of these, only 1.8% (10) used modern methods. The modern methods used were oral pills used by four women, injectables, six women, condoms, two women and rhythm method, two women. Five women (0.9%), out of the 556 women that were not pregnant at the time of the survey were using modern contraceptives; of these three were using injectables while two were using oral pills.

For the women not currently using modern contraceptives and not pregnant, ignorance was given as the main reason for non–utilization, as 41.7% (230) of the 551 women said they did not know about them. Other main reasons were husband's refusal to grant consent to 18.7% (103) women, while 17.6% (97) of the women felt there was no reason to start using contraceptives since they were yet to complete their family size. Religious disapproval and lack of belief in contraceptives were the reasons for non-utilization given by 15.4 % (85) and 10.2% (52) women, respectively (Table 3).

**Utilization of antenatal services**

Of the 576 women who have had at least one term pregnancy in the past, only 25.9% (149) admitted to seeking orthodox attending antenatal care from health clinics during their last pregnancy. Of these, the proportion that booked during the first, second and third trimester were 18.8% (28), 41.6% (62) and 39.6% (59), respectively. There was a significant association only between utilization of antenatal services and education ($X^2$ = 29.2, df =2 and p<0.05)

The mean age of pregnancy at booking was 6.4 months and the average number of clinic visits was 5.2, with the non educated women having a lower mean number of visits, 3.2 while the number of visits for those with Quranic and formal education were similar, 5.6 visits each.

When asked reasons for non -utilization of antenatal care service by the 427 women who did not seek antenatal care during their last pregnancy, 42.9% (183) felt orthodox antenatal care was not necessary, husband's refusal to grant consent was cited by 36.1% (154) while 35.6% (153) indicated a lack of awareness about the availability of such a service (Table 3).

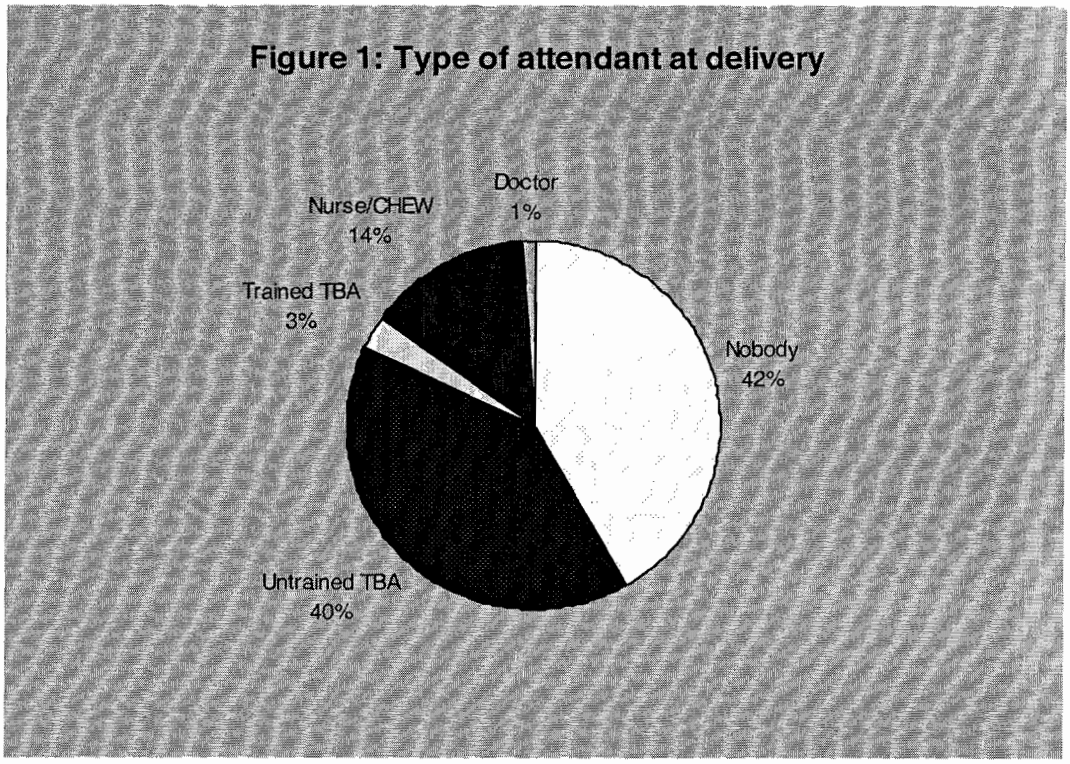
**Utilization of delivery services**

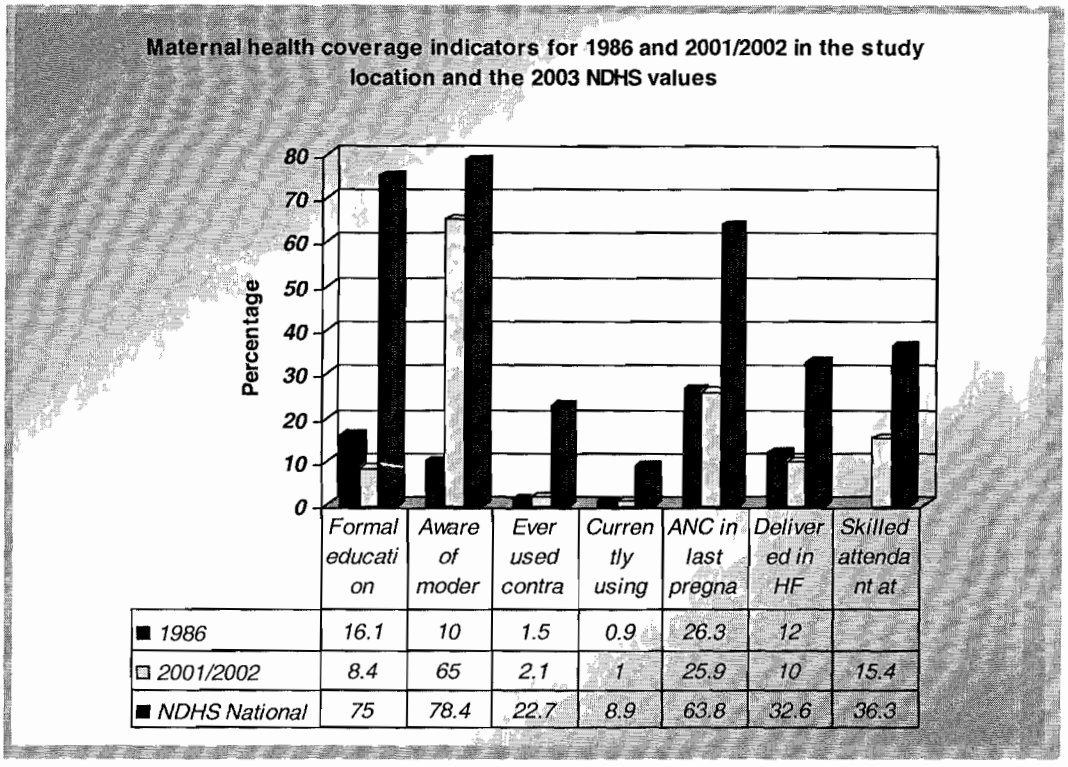
Five hundred and seventy six women had a history of at least one full term pregnancy and delivery. When asked about place of delivery during the last pregnancy, 90.1% (524) indicated that they delivered at home while 9.9% delivered in a health facility.

Two hundred and forty two women (42%) had their deliveries with no attendant at all to supervise, untrained traditional birth attendants were the supervisors for 40% (230) of the women, while other attendants at delivery included trained traditional birth attendants, 3%(17), nurse midwives/community health extension workers 14% (81) and doctors, 1% (6) (Figure 1)

For the 524 women that did not have their last delivery in hospital, cultural unacceptability of hospital practices was the main deterrent mentioned by 37.0% (194) of the women.

Geographical inaccessibility, high cost of hospital treatment and negative staff attitude were the




| | Formal education | Aware of moder | Ever used contra | Currently using | ANC in last pregna | Delivered in HF | Skilled attendant at |
|---|---|---|---|---|---|---|---|
| 1986 | 16.1 | 10 | 1.5 | 0.9 | 26.3 | 12 | |
| 2001/2002 | 8.4 | 65 | 2.1 | 1 | 25.9 | 10 | 15.4 |
| NDHS National | 75 | 78.4 | 22.7 | 8.9 | 63.8 | 32.6 | 36.3 |

reasons given by 36.5% (191), 35.4% (186) and 18.5% (97) respectively (Table 3).

**Comparison of maternal coverage levels with 1986 data**

When this data was compared to the baseline data obtained for the LGA in 1986, figure 2, the observation, except for knowledge of contraceptives, was a general decline in the rates. The proportion of females that had had some formal education significantly declined from 18.1% to 8.4% ($X^2$ = 14.7, df=1 and $p < 0.01$). There was more than a six-fold increase in knowledge of

contraceptives, from 10% to 65% between 1986 and 2000/2001 and the difference was statistically significant ( $X^2$ =267, df = 1 and p < 0.001). The proportion of women that had ever used contraceptives marginally increased from 1.5% to 2.1% while that of those currently using contraceptives marginally declined from 1% to 0.8%; these differences were however insignificant (p= 0.95) for both. There was no significant difference in antenatal uptake; there was slight decrease of less than 2% from the 26.3% valued obtained in 1986 (p = 0.95) while hospital deliveries significantly declined from 12% to 10% (p < 0.01).

**Discussion**

Using the selected indicators, with the exception of knowledge of contraceptives, the study has demonstrated that hardly any progress has been made in PHC implementation in the study area.

Even though there was a more than six-fold increase in the level of knowledge of contraceptives from 10% in 1986 to 65% in 2000/2001, the level was still below the 2003 National Demographic and Health Survey north-western zonal and national values.[16] The marked improvement in contraceptives knowledge in the locality may be associated with a Rotary-supported family planning programme that was carried out from 1995 to 2000 that had a strong public education and community sensitisation component. Even though awareness of family planning was high among the study population, there were still gaps in their knowledge as more than a fifth of those that knew about family planning were unable to mention correctly a single method. Major gaps were found between knowledge and practice as less than 1% of the respondents were currently using a contraceptive method and only 1.8% had ever used a modern method compared to 1.6% in 1986. These figures were all below the national, regional and rural contraceptive prevalence rates recorded in both the 1999 and the 2003 National Demographic and Health Surveys.[9, 17] The importance of contraceptives in expanding women's choices, giving them control over their lives and reducing the incidence of high risk pregnancies have been well documented. [18] However, many factors have been found to affect a woman's fertility regulation decisions; they include the status of the woman, the survival chances of her children and knowledge of, availability of, access to and quality of family planning services.[19] The very low status of the women in the area and cultural and religious aversion to family planning may be working in synergy with health services-related factors to limit utilization of family planning in the locality.[20]

The importance of antenatal care and skilled attendance at delivery in reducing maternal morbidity and mortality, especially in developing countries is well known.[21, 22] The study found that instead of the expected increase, there was a marginal decline in the rate of utilization of antenatal and hospital deliveries in health facilities. The women that had ANC tended to book late but the total number of antenatal visits they had was above the minimum of 4 recommended by WHO.[23] Utilization of health facilities for deliveries declined with only one in ten of the respondents delivering in a health facility and 15% having the deliveries supervised by a trained attendant. These values are all below the national and regional values.[17]

The WHO has set a target of reducing by three quarters between 1990 and 2015 the maternal mortality ratio and increasing to 90% delivery under the supervision of trained birth attendants as part of the millennium development goals.[24] Given the velocity and direction of change of the maternal health indicators in the practice area, in spite of the investments of primary health care, these appear unattainable.

The question is: why has PHC made hardly any progress in the study area? A number of reasons can be adduced.

Primary health care was introduced at a time African countries, Nigeria inclusive were undergoing economic hardships which led to introduction of economic structural adjustment policies that had serious adverse effects on the quality and access to health services at all levels. In the study area, the introduction of cost-recovery policies in health facilities in the eighties was found to lead to decline in utilization of health services at both the primary and tertiary levels[25] and serious adverse effects on obstetric services uptake and outcomes.[26] Zaria LGA was one of the first LGAs in the country to start implementing the Bamako Initiative in the early nineties. While Bamako Initiative, which was one of the strategies evolved to remedy the decline in the funding and quality of health services, was found to result in increase utilization of PHC services in an LGA in south eastern Nigeria[27], an assessment of PHC in Sabon Gari LGA, the site of the study found an almost 60% decline in the utilization of antenatal care between 1994 and 1997 in the LGA.[28] The expected improvement in the quality of care was not evident as essential equipment were found lacking in many of these facilities.[28, 29] In fact, a national assessment of the Bamako Initiative in 2003 found that in most LGAs in the country, the Bamako Initiative had collapsed and there was a

general decapitalization of the funds.[30]

An evaluation of Nigeria's PHC efforts by WHO in 1992 identified considerable weaknesses in the health system and programmes as contributory to the poor PHC services coverage.[11] The range and scope of essential PHC services have been found to decline as one moves to the periphery of the health care system in the country.[31] In the LGA where the study was conducted, less than 40% of the local government health facilities were found to be providing ANC services and none was providing delivery services in the nineties.[28] The WHO in its 2000 world health report ranked Nigeria 187 out of 191 countries in terms of health systems development. A national assessment of PHC in 2003 also found lack of adequate equipment, drugs and health personnel in PHC facilities.[32]

The rising poverty levels in the country[32] in the face of increasing cost of health care and physical accessibility problems may be added factors militating against service uptake. However, social and cultural factors appear to be major impediments to utilization of allopathic maternal health services in the study location. Gender inequalities and marginalization of women in decision–making, even in matters relating to their health, including decisions to use health services have been identified as major constraints to health services utilization in the study area.[33] One of the indicators of the status of women is female education. The study showed a decline by almost half in the female education from the 1986 level, with only about one in ten of the respondents exposed to some Western education. The female education level is much lower than the north-west value of 41.6% recorded during the NDHS of 2003 and the national average of 75%. Female literacy is not only one of the indicators of assessing socio-economic development but it is also positively associated with utilization of maternal health services.[34] The very low level of female education recorded may be a major impediment to their uptake of maternal health services.

Some of these constraints were confirmed by the women as impediments to their utilization of the services. A starting point towards utilization of a service is the knowledge of its availability. Ignorance about the existence of family planning services was the main reason why women did not avail themselves of the services. It was one of the main reasons for poor uptake of ANC services as majority of the women thought that pregnancy is a normal event and any woman not ill during pregnancy does not require antenatal care. The Marginalization of women in decision-making was also another important reason for the poor family planning and antenatal service uptake as refusal of husbands to grant the women consent to use the services was also important reason given by the women for poor service uptake. Cultural popularity of home delivery and traditional birth attendants and cultural aversion to hospital deliveries have been documented as reasons for aversion to deliveries in health facilities,[35] this was confirmed by this study as a one of the leading causes for poor utilization of orthodox maternal health services. Other major factors alluded to by the women had to do with access to the services, both geographical and economic and poor quality of available services, especially the negative attitude of health workers.

Current health reform efforts in the country have reiterated the centrality of PHC in health development in Nigeria.[36, 37] However, given the rate of progress of PHC implementation in the country, the goal of attainment of health for all Nigerians using the PHC approach appear a mirage. There is an urgent need to review the strategies and methodologies of PHC implementation in the country with a view of investing in systems development and building the capacities of communities and LGA to plan and implement PHC. While the National Primary Health Care Development Agency rightly recognized the need to revamp PHC, errors are still being committed as the emphasis since the beginning of the millennium has been to build more health centres in spite of the widespread evidence pointing to the contrary. The Presidency has identified PHC as one of the antipoverty measures of its regime, there is a need to give practical realization to the rhetoric. Measures to redress poverty and improve the status of women should also be put in place.

In conclusion, empirical evidence has confirmed that PHC, the bedrock of the national health policy and the current health reform effort has not made any appreciable impact in improving coverage with maternal health services among rural communities in Zaria environs and, the millennium development goals as it relates to safe motherhood remain a very distant unattainable dream. If MCH has been given undue emphasis in PHC implementation in the country, then it is likely that assessment of other components may demonstrate a worse result. Inadequate availability of services, poor geographic and economic access to and poor quality of available services appear to be working in synergy with ignorance, low status of women and poverty to frustrate progress in PHC implementation. There is an urgent need to rethink the strategies and responsibilities for PHC for it to become the key to the attainment of health for all.

## References

1. World Health Organization, Primary Health Care: The Alma-

Ata Declaration. Geneva, WHO, 1978

2. World Health Organization, World Health Report 2000. Geneva, WHO 2000

3. William CD and Jelliffe DB. Mother and Child: Delivering the Services. Oxford University Press, Oxford 1982, 22-26.

4. Starrs A. Preventing the tragedy of maternal deaths: A report of International Safe Motherhood Conference, Nairobi Feb 1987. The World Bank, Washington DC.

5. World Health Organization. Women and children's health through funding and management of essential drugs at community level: the Bamako Initiative, WHO/AFR/H. Brazaville, WHO, 1987

6. Monekosso GL. District health management: planning, implementing and monitoring a minimum health for all package. WHO regional office for Africa, Sept 1994.

7. Federal Office of Statistics and UNICEF. Multiple indicator cluster survey. FOS, Abuja 1999

8. Grant JP. State of the world's children. Oxford University Press, New York. 1990

9. National Population Commission and Institute for Resource Develpoment/Macro International. Nigeria Demographic and Health Survey 1999. National Population Commission Abuja and MD Institute for Resource Development/Micro International Columbia. 2000

10. Federal Ministry of Health, The National Health Policy and Strategy to Achieve Health For all Nigerians. FMOH, Abuja 1988

11. Ransome Kuti O. Sorungbe AOO, Oyegbite KS and Bamisaiye A. (1990). Strengthening primary health care at local government level: the Nigerian experience. Academy Press Ltd, Lagos.

12. World Health Organization (1992). Local Government focussed acceleration of primary health care: The Nigerian experience. Report of a WHO review. WHO, Geneva.

13. Ejembi CL, Enahoro FO, Gana GF. Hassan SH and Bandipo AB, Report of the Primary Health Care Pilot Survey of Zaria Local Government Area. Community Medicine Department ABU, 1986.

14. World Health Organization. Development of indicators for monitoring progress towards health for all by the year 2000. WHO, Geneva, 1981

15. Ejembi CL and Enahoro FO. Reproductive Behaviour Among Rural Hausa Women, Paper presented at the Conference on Women and Health organized by Women in Nigeria at the Conference Hall, Lagos University, Akoka, 9th – 12th April 1990

16. Ejembi CL and Bandipo AB. Fertility pattern of rural Hausa women. Research report submitted to Social Science Council of Nigeria. 1990

17. National Population Commission and ORC Macro Nigeria Demographic and Health survey 2003.

18 Fortney JA. The importance of family planning in reducing maternal mortality. Studies in Family Planning. 1987; 18(2) 109-14

19. Coal AJ. The demographic transition in proceedings of the 1973 conference of the scientific study of population pp 53 – 72

20. Walls, LL. Dead mothers and injured wives: the social context of maternal morbidity and mortality among Hausa women in northern Nigeria. Studies in Family Planning. 1998; 29(4): 341-359

20. World Health organization. Coverage of maternity care. 4th edition. Department of Reproductive Health and Research, WHO, Geneva, 1996.

21. Harrison KA. Child bearing, health and social priorities. British Journal of Obstetrics and Gynaecology. 1985; 92 Suppl.5

23. World Health Organization. Antenatal care. Report of a technical working group, Geneva 31 October to 4 November 1994 (WHO/FRI/MSH/96.8) Geneva, 1996

24. World Health Organization. Reproductive health report to the 57th World Health Assembly by the Secretariat. WHO A57/13 Geneva, April 15th, 2005

25. Ejembi CL and Bandipo AB. The impact of Nigeria's structural adjustment programme (SAP) on the health care delivery system. Paper presented at conference 'SAP and the future of Nigeria'. CSER, ABU Zaria 1989.

26. Ekwempu CC, Maine D, Olorukoba, MB, Essien ES and Kisekka MN. Structural adjustment and health in Africa. Lancet 1990; 336 (7): 56-57

27. Ugochukwu BSC, Onwujekwe OE and Akpala CO. Did the Bamako Initiative improve the utilization of maternal and child health care services in Nigeria? A case study of Orji Local Government Area in South East Nigeria. Journal of Health and Population in Developing Countries /URL: http:// www.jhpdc.unc.edc/ Date published 9th Feb 2004.

28. Department of Community Medicine, ABU, Assessment of Primary Health Care. Report submitted to UNICEF, Kaduna. 1988.

29. Musa EO and Ejembi CL. Reasons and outcome of paediatrics referrals from first level health facilities in Sabon Gari, Zaria, North western Nigeria. Journal of Community Medicine & Primary Health Care 16 (1) 10 – 15.

30. Adeniyi J, Ejembi CL, Daiyabu M, Bamgboye O. and Ogundeji MO. Status of the Bamako Initiative in Nigeria: Report of Capitalization Study. National Primary Health Care Development Agency 2002.

31. Adeniyi JD, Ejembi CL, Pollen Igbonusun, Daiyabu M, Nwagbo FE, Ogundeji MO and Ayuba Z. The Status of primary health care in Nigeria: Report of a needs assessment survey. National Primary Health Care Development Agency 2001.

32. Federal Office of Statistics. Poverty profile for Nigeria 1980 – 1996. FOS, Abuja 1996.

33. Smyke P. Women and health Zed Books Ltd, London. 1991

34. Harrison KA. Literacy, parity and maternal mortality in the third world. The lancet (ii) 865-66

35. Ejembi CL. Reproductive health realities of Hausa Women. Report of a Women in Nigeria project submitted to Ford Foundation, Nigeria. August 1993.

36. Federal Ministry of Health sector reform: medium plan of action, 2000 to 2002. FMOH, Abuja. January 2000.

37. Committee on the repositioning of the Federal Ministry of Health. Blueprint on repositioning of the Federal Ministry of Health for better performance. Report submitted to the Minister of Health, FMOH, Abuja, July 2004.