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Did the Bamako Initiative improve the utilization of maternal and child health-care services in Nigeria? A case study of Oji River Local Government Area in Southeast Nigeria

Dr. Benjamin S.C. Uzochukwu
Dr. Obinna E. Onwujekwe
Prof. Cyril O. Akpala

ABSTRACT

The study was undertaken to determine the utilization of maternal and child healthcare services in health centers before and after the introduction of the Bamako Initiative program in Southeast Nigeria. Although the utilization of immunization, antenatal and delivery services improved, curative service utilization worsened. The potential exclusion of some socioeconomic groups from utilizing services due to financial reasons, distance and non-availability of medical doctors are major factors militating against the use of these services

Keywords: Utilization, MCH services, Bamako Initiative, South-east Nigeria

Address for correspondence: Dr. BSC Uzochukwu Department of community medicine, College of Medicine, University of Nigeria, **Enugu-campus, Nigeria. P.O. Box 3295 Enugu, Nigeria.**
E-mail: **bscuzochukwu@yahoo.com** Phone: 234-42-259609 Fax: 234-42-259569

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INTRODUCTION

The Bamako Initiative program (BI) sought to accelerate and strengthen the implementation of primary health care (PHC), with the goal of achieving universal accessibility to these services. It was an initiative that African Ministers of Health introduced in 1987 to reorganize and strengthen Primary Health Care (PHC) with emphasis on Maternal and Child Health (WHO 1987; UNICEF 1988). The program has been implemented in 33 countries in Africa, Asia and Latin America and received political support from African leaders since its inception (OAU 1989).

The purpose of this paper is to determine if utilization of maternal and child health-care services (MCH) in health centers improved after the introduction of the Bamako Initiative program (BI) in Southeast Nigeria. This is as, more than a decade after its adoption in Nigeria there are still huge information gaps on whether the BI has been able to improve utilization, coverage and accessibility to key PHC interventions. This is in addition to the goal of equity, which is the bedrock of the BI

The necessity for the BI was the situation in the 1980s when there was severe problem in financing health services in sub-Saharan Africa including Nigeria. Yet it was assumed that, demands on health services would increase as a result of high population growth rates successful social mobilization and the oncoming AIDS pandemic. Furthermore, Africa was facing a crisis in health manpower, with health workers going long period without pay or with late payments, and remaining without in-service training and supervision. This often resulted in negative attitudes from health workers whose salaries in most cases had lost their purchasing power (UNICEF 1990). In Nigeria the quality of health services was also acknowledged to be poor (World Bank 1994). Africa with only 14% of the world's population was projected to account for 40% of world's infant and child deaths by the year 2000, if the prevailing mortality rates then continued (UNICEF 1987). There was also the relatively low access to health services in the continent a general decline in health-care expenditures in years, with many countries spending a decreasing proportion of the national budget on health (Vogel 1989). The provision of health care services became more expensive and negatively affected their availability, accessibility and affordability.

In recognition of this dismal and most unacceptable situation, the World Health Organization (WHO) African Region, in collaboration with United Nations International Children's Fund (UNICEF) in September 1987, proposed measures, at its annual meeting of African Ministers of Health in Bamako, Mali, for providing the necessary resources and dealing decisively with the problems of health care delivery in many parts of sub-Saharan Africa. These measures form the basis of what is now known as the "Bamako Initiative" (BI).

The Bamako Initiative Program:

The major aim of the initiative is to ensure access to affordable essential health services for the majority of the population, restore consumer confidence through the improvement in the quality of services provided with emphasis on promoting the health of women and children. The strategies for achieving the objectives of the BI are fivefold. These are to (i) revitalize public health systems by renovations and extension of peripheral health care delivery systems; (ii) decentralize decision-making from the national to the district level; (iii) institute community financing to cover some local operating costs of primary health care; (iv) community co-management of basic health services, including the management of locally generated funds; and (v) defining and providing a minimum package of essential health services like immunization, antenatal care, assisted delivery, and post-natal care for women at the level of basic health units.

In 1988, Nigeria adopted the BI as a strategy for strengthening PHC with five major components. These are community participation through a variety of local government, district and village-level committees;

improvement of MCH services; the provision of essential drugs; cost-recovery and enhanced management, supervision and monitoring systems (Ogunbekun et al 1996). Currently, about 60 out of the 774 local governments in Nigeria, covering approximately 10% of the population have the BI (Shehu 1997). There are plans to extend the program to more local government areas in the country.

Oji River local government area (LGA) was admitted into the BI program with 17 other LGAs in 1993, with financial support from the Federal Ministry of Health (FMOH). The LGA began with the revitalization of its existing 14 PHC centers. Over a period of 8 years, the program expanded to 25 health centers covering all the communities in the LGA. At its inception, the LGA's health staff, Village Health Workers (VHWs), Traditional Birth Attendants (TBAs) and the community leaders were given various specified training to equip them with the relevant knowledge, skills and capability to manage the program. Since admission into the program, the LGA was expected to be carrying out the BI activities according to the National guidelines.

The BI program has been the subject of wide spread debates and investigations on whether it could and had achieved the objectives of ensuring efficiency and equity in PHC (Kanji 1989; Garner 1989; Litvack et al. 1989; McPake et al. 1997; Gilson 1997). The specific concerns were the potential effect on equitable access to PHC services because of the user charges, community financing, integration of BI activities with the rest of the health system and management and logistic difficulties associated with community based revolving drug funds. The rest were the focus on drugs as the main strategy for cost recovery efforts and problems of sustainability and dependency.

Some earlier studies in parts of Nigeria show wide variations in utilization and coverage levels amongst facilities within different local government areas. While some showed an increase in antenatal care utilization and supervised delivery coverage, others recorded low levels of utilization and coverage of these MCH services (Ogunbekun et al. 1996; McPake et al. 1997; Ogundeji 1997). All the LGAs that showed increased coverage and utilization were donor agency-supported and it is doubtful the same can be said about government-supported LGA

Information on the BI in Nigeria is therefore sought on the performance of the program especially over a long time frame, with a view to suggesting ways of improving this aspect of the program now that the country is about scaling-up BI activities in the country. The information will help policy-makers, health managers and service providers both in Nigeria and elsewhere to effect a continuous improvement in the modification, implementation, monitoring, evaluation and constant improvement of the BI program.

MATERIALS AND METHODS

The study was conducted in Oji River Local Government Area (LGA) in South-east Nigeria. The area is located 40 km south of Enugu, the State Capital and has a projected population of 86,767 in 2001, projected from the 1991 census. The area is predominantly rural with subsistent farming as the major occupation of the inhabitants. It has 25 primary health centers, and 2 government owned hospitals and 10 privately owned hospitals. The LGA started the BI program in 1993. The LGA authority has a central drug store manned by trained managers that operate central drug revolving fund. The LGA PHC management committee is responsible for overall financial management of drugs stock at the apex of the system and for overall supervision within the LGA. Seed stock was released to the LGA by the FMOH, and it in turn supplied seed stocks (based on some set criteria) to the 10 district stores, each with a revolving fund and managed by the district supervisor. The districts are responsible for drug distribution to the health centers and health posts at the lower tiers of the system. The District Development Committee supervises the system at the district level.

At the village level, the VHWs collect their seed stock (made up of approved type and number of drugs) from the district stock. These trained volunteer village health workers receive supervision from the nearest health facility and the Village Development Committee. Subsequent drugs requirements are purchased on cash and carry basis,

using funds generated from the sale of the seed stock, the VHWs purchase from the district, the district from the LGA, and the LGA from the state central store (if available) or direct from manufacturers. Each level i.e. village, district and LGA conduct its market survey and fixes the sales prices to meet administrative cost and ensure that it has the ability to replenish its drug stocks. Each level also operates a bank account into which the proceeds from the sale of drugs are paid. The drugs are sold to the users at a profit. This profit in addition to payments by consumers for cards, disposables (syringes, cotton wool) and 'service charge' serves to buy back the initial seed stock of drugs and to improve access to care and quality of services.

Utilization studies on BI in Nigeria have always employed longitudinal retrospective methods with short time frame. However, our study employed both longitudinal (with long time frame) and cross-sectional approach, a method that hitherto has not been used by other studies. The longitudinal approach adopted was to show the trends in the utilization of MCH services. On the other hand, the cross-sectional survey was to reveal what was obtainable at the time, and to know the proportion of those not using the BI health centers, the reasons for use and non-use and the extent of exclusion from health services.

Therefore, retrospective health center data on first visits for curative services, childhood immunization attendance for oral polio vaccine (OPV_1) and measles vaccine, ante–natal care (ANC) utilization rate (number of pregnant women who made at least one antenatal visit) as well as attendance for delivery services were obtained as an aggregated data from the LGA health office for the period covering January 1989 to December 2001. During first visits for curative and ANC services, patients pay for their cards, laboratory investigations and drugs. For immunization, they pay for only the cards and needle/syringes when government stocks are not available. The vaccines are free. Payment is also made for delivery depending on whether the delivery is spontaneous or assisted, which includes drugs. This utilization data for each service was obtained for each year and the population covered divided this. The attendance rates per 10,000 populations were then calculated. The population figures for each year were adjusted for estimated population growth of 2.8% per annum for rural areas of Nigeria.

Also, a cross-sectional study on current MCH services utilization was done in December 2001 with pre-tested questionnaire administered to women from 405 households that were selected from a sample frame of PHC house numbering that totaled 4,710 households. Households were selected if it had a woman who had a live delivery in the past 12 months or has at least one child who is less than or equal to 12 months old. The information collected were the rate of utilization of OPV1 immunization services, antenatal, delivery and curative services. For curative care, a two-week illness recall was used, as this period has been shown to be the limit of a reliable recall for events like minor illness (Kroeger 1983). The reasons for use and non-use of the BI health centers were also determined and the respondents were allowed multiple-responses. All the 405 women responded, giving a response rate of 100%.

A possible limitation of the study is query about the quality of data from the health facilities. This is because the records in the years before BI (1989-1992) were poor. Therefore, there could be incompleteness of service data during the pre- BI period. Furthermore, the analysis for the pre-program period was based only on health center data because no household survey data on health center utilization are available for this period. Also, the health center data was collected as an aggregated data and did not allow for inter clinic analysis of utilization. However we believe that these limitations did not introduce serious bias in the results. The results of this study must be seen as possibly relevant only for the LGA. A comparison of two or more LGAs operating the BI and with a non-BI LGA might have shed better light on whether the BI improved the utilization of MCH.

RESULTS

Utilization of MCH services from the facilities' records:

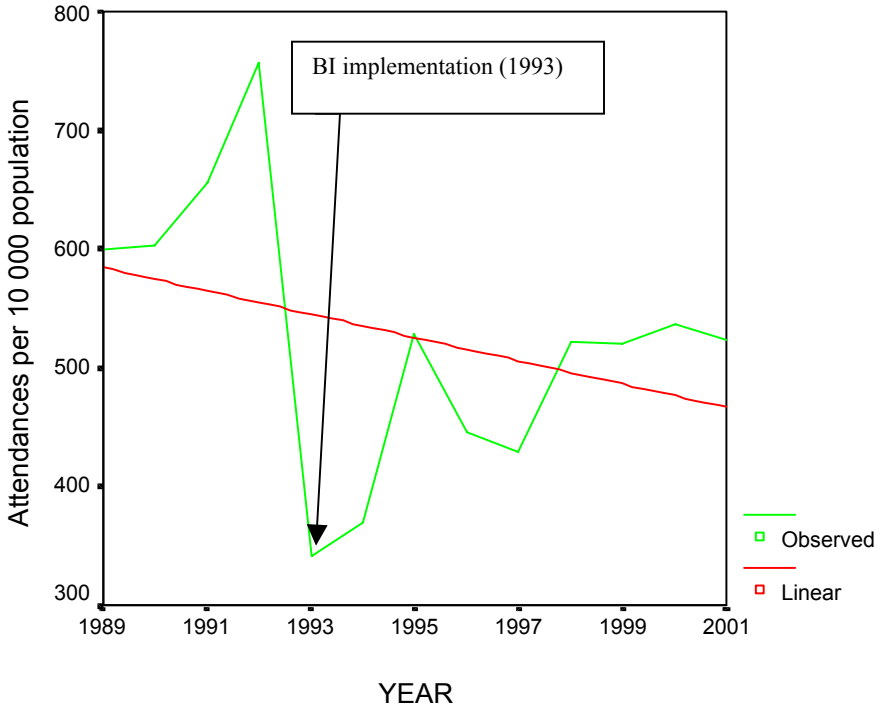
Table 1 shows that there was a trend of decreased utilization of curative service which started before the introduction of BI. However, there was a steep increase thereafter. The increase from 1993 to 1995 was 55%, with a decrease of 19% from 1995 to 1997 and an increase of 22% from 1997 to 1999. There was a minimal increase of 0.7% from 1999 to 2001. The general increase never got to the pre-BI level as shown by the inverse regression line in Figure 1.

Table1. First curative visits, ANC attendance, deliveries, OPV1 and measles vaccination per 10 000 population, 1989-2001

Year/ Range	No of Health centers	First curative visits per 10 000 population	ANC attendance per 10 000 population	Deliveries Per 10 000 population	OPV1 vaccination per 10 000 population.	Measles vaccination per 10 000 population.
1989	10	599.00	22.00	13.40	20.30	17.10
1990	10	603.60	65.00	27.90	25.90	30.20
1991	12	655.30	53.00	30.80	19.10	15.80
1992	14	756.90	58.00	16.40	40.50	29.10
1993* **	18	342.00	42.00	16.70	23.80	11.70
1994	20	370.10	89.00	39.30	33.00	21.10
1995	20	528.70	88.00	43.10	50.90	52.10
1996	21	445.50	102.00	57.50	62.10	44.40
1997	21	428.90	127.00	55.20	69.10	55.00
1998	21	522.00	131.00	67.40	74.50	57.80
1999	21	520.80	129.00	66.90	70.00	49.20
2000	23	536.40	98.00	56.10	68.60	45.80
2001	25	523.00	95.00	53.20	60.00	45.30

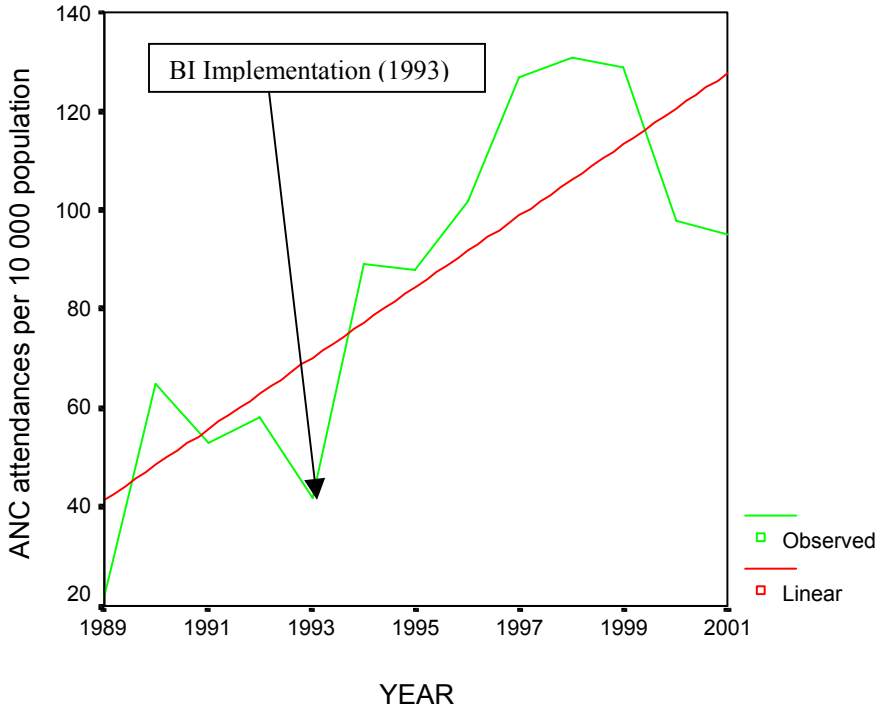
*** Implementation of Bamako Initiative 1993)

Figure 1: First curative visits at health centers per 10 000 population, 1989-2001



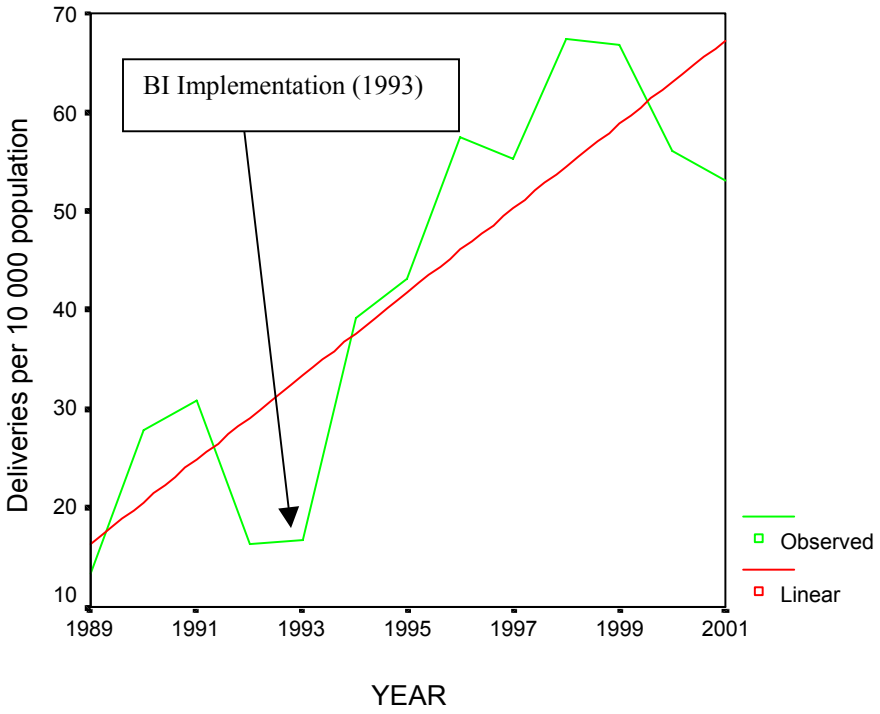
In contrast, the ANC attendance, deliveries, measles and OPV1 immunization show an overall upward trend for the period under study as shown in figures 2 to 5 respectively. For ANC, (Figure 2) there was a marked increase from 42 per 10 000 population in 1993 to 88 per 10 000 population in 1995 (an increase of 110%); to 127 per 10 000 in 1997 (an increase of 44% from 1995); to 129 per 10 000 in 1999 (an increase of only 1.6% from 1997). In 2001, there was a decrease to 95 per 10 000 giving a decrease of 26% from 1999.

Figure 2. ANC attendance at health centers per 10 000 population, 1989-2001



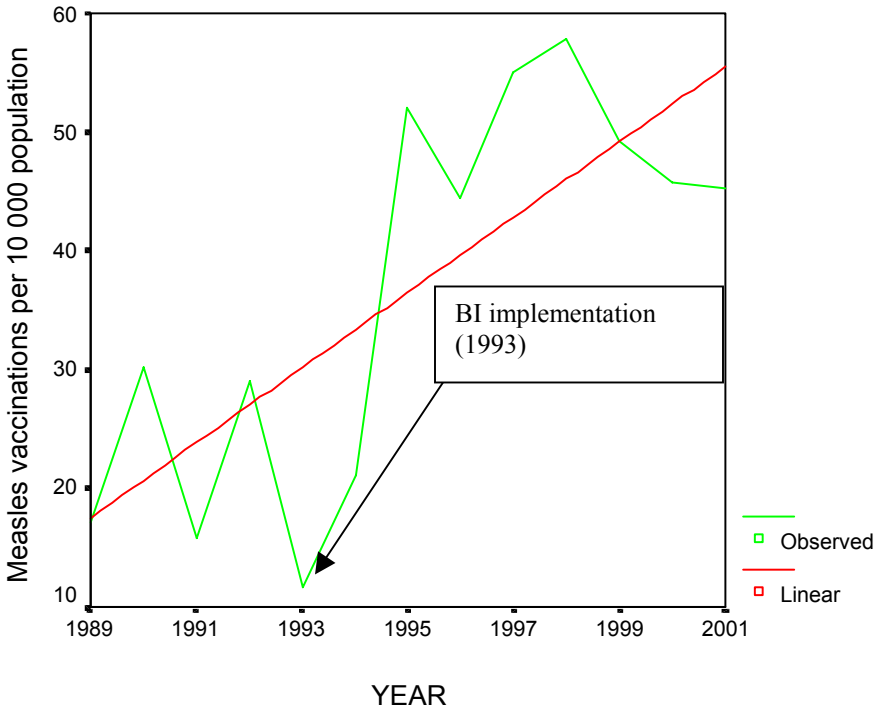
For deliveries, (Figure 3), there was a marked increase from 17 per 10 000 population in 1993 to 43 per 10 000 population in 1995 (an increase of 158%); to 55 per 10 000 in 1997 (an increase of 28% from 1995); to 67 per 10 000 in 1999 (an increase of 21% from 1997) and a decrease to 53 per 10 000 in 2001 giving a decrease of 20% from 1999.

Figure 3. Deliveries at health centers per 10 000 population, 1989-2001



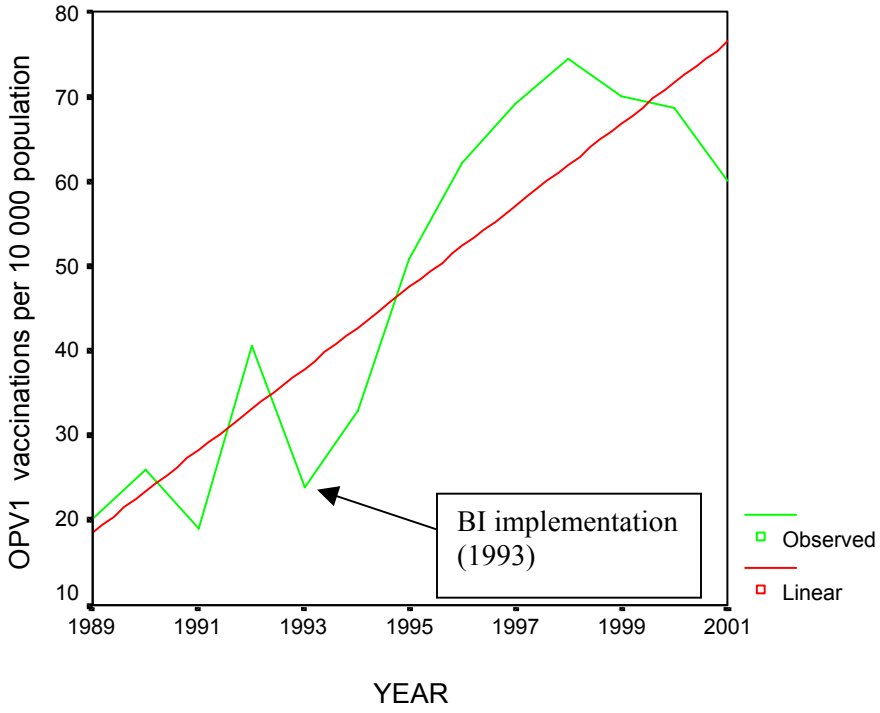
Also, for measles immunization, (Figure 4) there was a marked increase from 12 per 10 000 population in 1993 to 52 per 10 000 population in 1995 (an increase of 345%); to 55 per 10 000 in 1997 (an increase of only 6% from 1995) and a decrease to 49 and 45 per 10 000 in 1999 and 2001 from 1997 and 1999 respectively giving a decrease of 11% and 8% from 1997 and 1999 respectively.

Figure 4. Measles immunization at health centers per 10 000 population, 1989-2001



For OPV 1 immunization, (Figure 5) the increase was from 24 per 10 000 population in 1993 to 51 per 10 000 population in 1995 (an increase of 113%); to 69 per 10 000 in 1997 (an increase of 35% from 1995); to 70 per 10 000 in 1999 (an increase of 1.4% from 1997) and a decrease to 60 per 10 000 in 2001 (a decrease of 14% from 1999).

Figure 5. OPV 1 immunization at health centers per 10 000 population, 1989-2001



However, overall, the increase from 1993 to 2001 were 53%, 126%, 218%, 152% and 287% for first curative visits, ANC attendance, delivery, OPV1 and measles immunization respectively. All the increases were statistically significant ($p < 0.05$). The number of health centers also increased from 14 in 1993 to 25 in 2001.

Household questionnaire survey:

Out of 405 women interviewed, the age group (26 – 30 years) had the highest percentage of respondents (30.4%). The age range was from 13 years to 48 years as teenage pregnancy (19%) was quite high. While 76.5% of the women were married, 14.8% were single, (22%) separated, (2.5%) divorced and (4.0%) were widowed. Single parent hood (14.8%) is high in the study area. 22 (5.4%) of the respondents had no formal education, while 164 (40.5%) had Primary education; 193 (47.7%) had secondary education while 26(6.4%) had post-secondary education. 318 (78.5 %) of the respondents lived within a distance of 5 Kilometers from their nearest health center 93.1% within 10 Kilometers 0.7% more than 10 Kilometers and 6.2% could not estimate the distance.

As shown in table 2, out of the 405 in the survey, 349 (86.2%) immunized their children against measles out of which 318 (91.1% of 349) were at the health centers. Use of General hospital accounted for (6.9%), Private Clinic (1.1%) and Native doctor (0.9%). For ANC, 389 (96%) of the 405 respondents attended antenatal clinic out of which 263 (67.6% of 389) was at the health centers. General hospital accounted for (17.7%) of attendance, Private clinics (9.3%), Traditional Birth Attendants (4.4%), and Native doctor (10%). More than half 238 (58.8%) of the respondents used the health center for their delivery while 17% used the General Hospital, 11.4% used the Private Clinic, 5.2% used a TBA, and 7.6% delivered at home and therefore did not use any health facility. Also, out of 352 women that were sick in two weeks preceding the survey, 228 (65%) sought treatment out of which 106 (46.7%) went to

the Health Centers, 43 (18.8%) went to the General Hospital, 16, (6.9%) to Native doctor, 29 (12.6%) had self medication, 20 (8.6%) went to a Private Clinic, 10 (4.4%) to Prayer house/Church.

Table 2: Preferred choice of health facility

Health Facility	Curative N (%)	Immunization N (%)	Antenatal N (%)	Delivery N (%)
Health Center	106 (46.7%)	318(91.1%)	263 (67.6%)	238 (58.8%)
General Hospital	34(18.8%)	24(6.9%)	69(17.7%)	69 (17%)
Native doctor	16 (6.9%)	3 (0.9%)	4 (1.0)	-
Self Medication	29 (12.6%)	-	-	-
Private Clinic	20(8.6%)	4 (1.1%)	36(9.3%)	46 (11.4%)
Prayer house	10 (4.4%)	-	-	-
T B As	-	-	17(4.4%)	21 (5.2%)
At home	-	-	-	31 (5.6%)
Patent Medicine dealer	4 (2.0%)	-	-	-
Total	228 (100)	349 (100)	389 (100)	405 (100)

Table 3 shows that for those that did not attend the health centers for immunization services, the absence of a medical doctor was given by 80% of them as the main reason for not attending. Other reasons given were long distance (33.3%), bad staff attitude (26.7%), long waiting hours (13.3%) and the cost of immunization (6.6%). The reasons for non-attendance at the health center for ANC services, included absence of a medical doctor (84.1%), bad staff attitude (47.6%), and long distance 34.9%. Other reasons given were cost, long waiting hours and non-availability of drugs being 9.5%, 7.9% and 5.0% respectively. Distance accounted for 26.3% of reasons given by the women for the non-use of the BI health centers for delivery services. Other reasons they gave were; poor staff attitude (29.3%), no drugs (5.3%) and long waiting hours (7.2%). For those that did not use the health center for curative services, 89.7% of them stated that this was because there was no medical doctor at the health center. Other reasons they gave for not utilizing the health centers were bad attitude of the health centers' staff (29.5%) unavailability of drugs (21.4%), high cost of treatment (6.8%), long distance (3.8%) and long waiting hours (4.2%). Distance, no drugs and absence of a doctor were all statistically significantly different among the different utilization measures.

Table 3: Reasons for non-use of primary health-care centers' services

Reasons	N = 122 Curative (%)	N = 31 Immunization (%)	N = 126 Antenatal (%)	N= 167 Delivery (%)	P-value
Too Far**	3.8	33.3	34.9	26.3	0.0041
Cost of Treatment	6.8	6.6	9.5	7.1	0.8022
Poor Staff attitude	29.5	26.7	47.6	29.3	0.3944
No Drugs**	21.4	13.3	5.0	5.3	0.00006
Absence of Doctor**	89.7	80	84.1	56.3	0.00000
Long waiting hours	4.2	13.3	7.9	7.2	0.7420

** $P < 0.05$ = Statistically significant

Table 4 shows that for those who used the health centers for immunization services, short distance was given by 92% of them as the main reason for attending.

Table 4: Reasons for use of primary health-care centers' services

Reasons	N = 106 Curative (%)	N = 318 Immunization (%)	N = 263 Antenatal (%)	N= 238 Delivery (%)	P-value
Short distance	90.6	92.0	88.2	86.4	0.1707
Cheap services	31.8	94.5	75.0	24.7	0.0646
Polite Staff **	29.2	25.0	15.0	20.2	0.0469
Drugs readily available**	32.7	72.0	90.0	82.8	0.0000
Short waiting hours	0.5	-	0.4	1.0	1.000
Good services	47.4	75.6	66.8	62.0	0.0959
Relative works there**	4.0	-	10.0	12.3	0.0447
No alternative	18.0	-	-	-	-

** $P < 0.05$ = Statistically significant

Other reasons given were cheap services (94.5%), good services (75.6%), drugs readily available (72%) and polite health workers (25%). The reasons for attending the health center for ANC services, included drugs available (90%), short distance (88.2%), cheap services (75%)and polite health workers (15%). Other reasons given were relative works there and short waiting time10% and 0.4% respectively. Short distance accounted for 86.4% of reasons given by the women for use of the BI health centers for delivery services. Other reasons they gave were; drugs available (82.8%), good services (62%), cheap services (24.7%), polite health workers (20.2%), relative works there (12.3%) and short waiting hours (1%). For those who used the health center for curative services, 90.6% of them stated that this was because of short distance. Other reasons they gave were good services (47.4%) availability of drugs (32.7%), cheap services (31.8%), polite health workers (29.2%), relative works there (4%), short waiting hours (0.5%) while (18%) said they had no other alternative. Drugs available, polite health workers and relative working there are all statistically significantly different across the different utilization measures.

DISCUSSION

The study shows that the BI may have increased the utilization of MCH services delivered through the primary health care system, as evidenced by the increase in utilization of curative, immunization, antenatal and delivery services which are PHC key interventions. However, there was a general fall in most of the indicator variables in 1993 when the program was started in the LGA. A possible explanation was that the communities had not been adequately mobilized by then, and thus were not aware of the improvements that had taken place in the health centers. However, another explanation was that Nigeria witnessed a lot of political and industrial turmoil in 1993 that led to loss of number of working hours in the public sector. For some indicators also, there was a steep rise in 1996 when drugs from the Petroleum Trust Fund (PTF) was injected into the health system which increased drug availability in the public health institutions. There was also a general decline in the indicators from 1999 to 2001. This can be attributable to the phasing out of the PTF leading to scarcity of drugs in health centers. It is also interesting to note that the increases in the first 2 years were much more marked than the later years. This can be explained by the fact that the initial phases may have witnessed improved quality in form of drug availability and that as the years went by, the sustainability of the drug revolving funds became a problem

As one of the strategies of the BI is to increase the number of peripheral health facilities, the number of health centers increased from 14 to 25 during the period under review. This was to decrease the distance to the facilities thereby increasing accessibility since they were sited in communities without health centers. Thus, the increased rate of utilization of PHC services may not be entirely attributable to the improvement in quality of service in terms of drug availability which is symbolic with BI program but also due to enhancement of physical accessibility to the health centers. However, this does not confound the findings, since utilization rates also increased in old PHC centers that started implementing BI first.

The increase in utilization of key maternal and child health indicators observed in this study with the introduction of BI is similar with findings, in Rwanda, Guinea-Bissau and Liberia where utilization increased (Soucat et al. 1997). However, our findings contrast with those found in Swaziland, Mozambique, Ghana, The Gambia and Zambia where declines in attendance rates occurred when user charges were introduced without a concurrent improvement of the availability of drugs, access to services and/ or quality of care (Shehu 1997; Abel-Smith and Rawal 1992). It was also found that the BI led to a decrease in the utilization of health services with the introduction of the BI and the major reason for the phenomenon was user-fees (Haddad and Fournier 1995).

Nevertheless, utilization of ANC is traditionally high in West Africa for cultural reasons (Levy-Bruhl et al. 1997). Thus, the observed rates in this study are comparable to those observed in Guinea-Bissau where the proportion of first antenatal visits is around 71% (Soucat 1995). Also, the utilization rates for curative services in this study are similar with evidence provided in Cameroon and Sierra Leone where about 40% of illness episodes are treated in BI health centers (Litvack 1992; Fabricant 1992). The utilization rate of curative care is higher in this study than was found in Ivory Coast, but lower than the rates in Benin and Guinea (Levy-Bruhl et al. 1997). Although there was a relative increase in first visits for curative services after BI, this increase never got to the pre-BI level despite quality improvement in form of drug availability. This might be as a result of fee introduction, which may have deterred people from using the health centers for curative services-an indicator, which is usually sensitive to changes in user-fee level (Blas and Limbambala 2001). But this was not so with the immunization and other service where minimal fees or no fees are charged.

Community members' responses revealed that short distance, good services provided, availability of drugs, cheap services, were the leading factors that consumers used in the choice of BI heath facility especially for

preventive services. These findings are similar to the findings of (Abel-Smith et al. 1992). However, it was reported that 57% of patients interviewed gave short distance as a primary reason for their choice (Mushi 1995). Among reasons for non-utilization of services, the absence of a medical doctor ranked highest followed by poor staff attitude and long distance. Thus, contrary to expectations, cost, though vital was not the prime reasons for non-use. This concurs with the findings of a previous study in Nigeria where only 2% of cases had cost as an important consideration for patient care (Egunjiobi 1983). The long distance signifies that the BI health centers are still geographically inaccessible to some community members. Although a good number are using them because of nearness. The improvement of MCH services can also have the added benefit of increasing the use of family planning services (Hotchkiss et al 1999). Roouth and Barkat (2000) also noted this in addition to the fact that the distribution of MCH and family planning services through routine home visits increased immunization coverage for both children and women.

Over the years the BI programs in Oji River L.G.A. have raised the utilization, coverage and accessibility to MCH interventions in PHC centers. This gradual improvement of utilization overtime suggests that primary health-care centers can benefit from BI strategies for years far beyond the short-term impact obtained by solely reintroducing drugs in the health centers. However, the reasons for non-use of PHC centers even in the face of improvements brought about by the Bamako initiative program should be tackled and the socioeconomic groups using and not using the centers should be investigated if the program is to become more effective and sustainable. Thus:

- Medical doctors should either be posted to cover a cluster of PHC centers, or pay at least weekly visits to these centers. This was as clearly demonstrated; the absence of a medical doctor is the greatest impediment to the utilization of MCH services, especially childbirth services. This could be because the women rightly associated childbirth with a lot of risk, and so would prefer to use services where they are sure there will be a medical doctor to take care of them in case they develop complications during childbirth.
- In-service training for PHC staff on developing better inter-personal relationships with the patients should be done to improve their attitude to work. This could also be made part of the curriculum of the health workers sent not only to the health centers but that operate in all public health facilities. There should also be avenues for unsatisfied patients to lay their complaints to the management of each PHC center. The official designation of a member of staff to be the public relations officer for each PHC center would also help as that person would deal with complaints of the patients. The person would also spearhead continuous community mobilization efforts needed to keep increasing the utilization of the PHC services and for sustainability of the BI.
- Outreach services would be a strategy to increase physical access to BI activities, while another strategy would be the construction of more PHC centers. This is important, as a good number did not use the health centers because of distance. As argued by (Haddad et al, 1998) the success of strategies to revitalize primary health care services such as those advocated by the BI requires a response adapted to the expectations of the population, especially in terms of quality. Other authors also argued that bringing the MCH services very close to the homes as strategies to improve the utilization and outcome of MCH services (Ibrahim et al 2000).
- The equity implication of the user fees for MCH services also needs to be addressed as they were reported to be a major impediment to utilization of MCH services. Because although the expansion of public network of health centers may be necessary it is not sufficient to promote equity in the utilization of health care services as was noted in Peru (Valdivia 2002). User fees for MCH services should therefore be accompanied by committed exemptions policies and actual

implementation for those unable to pay. An equitable financing mechanism in the PHC system could involve each PHC center getting a budget for the poor registered with them. Villages (through the community development associations) served by a particular health center would be told the maximum number of people to register per year. This could also form the corner-stone for enrolling the poor into the National Health Insurance Scheme, as each PHC center will receive some budget representing capitation payment for the poor and vulnerable groups like those requiring MCH services registered with them. Systems for ensuring adequate budgeting and monitoring strategies in the implementation of such novel systems will be designed for sustainability.

- Extending BI to general hospitals and private health facilities in form of Public-private mix might be an option in tackling some of the reasons for non-use of BI health centers. As shown in the study, a good number of households are already using these services.
- It will also be interesting to investigate the socioeconomic groups of households that are using and not using the health centers in other to address the equity implications of BI. More operations research is needed for this purpose.
- A comparison of two or more LGAs operating the BI from rural and urban areas will be helpful in deciding if there are geographical differentials in use of BI health centers

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