BARRIERS LIMITING WOMEN'S ACCESS TO PRIMARY HEALTHCARE CENTERS IN RURAL NIGERIAN COMMUNITIES

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ABSTRACT

This paper investigated the demand and supply-side barriers that limit women's access to Primary Health care centers (PHCs) in eight rural communities in Delta State, Southern Nigeria. The study is a cross-sectional household and health facility survey. Structured questionnaire and qualitative site assessment tool were used in collecting data for the study. Multiple response technique was use to elicit information on reasons for use and non-use of PHCs for maternal care needs. The site assessment report showed that the four PHCs assessed were lacking in critical infrastructure, medical equipment and human personnel. The multiple response techniques showed that reasons why women did not utilize maternal care services in PHCs were poor quality of care, cost of services too high, family members/husband disapproved it and distance from home to PHCs was too far. The site assessment showed that the PHCs do not measure up to internationally-recommended standard. The study concluded that demand and supply constraints interact in limiting rural women's access to PHCs and as such pragmatic interventions that simultaneously address both sides of the barriers should be implemented.

Key Words: PHCs, rural women, demand, supply, barriers.

INTRODUCTION

Nigeria did not achieve its Millennium Development Goal (MDG) -5 target, which aimed at the reduction of maternal mortality by 75% between 1990 and 2015 (Hogan, Foreman, Naghavi, Ahn, Wang, Makele, Lopez, Lozano and Murray, 2010).

However, Nigeria's maternal mortality ratio (MMR) reduced by 40% over the MDGs period (Yaya, Okonofua, Ntoimo, Kadio, Deuboue, Imoghan and Balawi, 2018; Ahuru, Efegbere, and Osaze, 2020). This feat was made possible by the several interventions initiated by the Federal Government of Nigeria. These efforts notwithstanding, MMR remains high and maternal health service utilization remains low in Nigeria. For instance, the proportion of Nigerian women who met the minimum recommended number of four ANC visits, had their deliveries in health institutions and underwent post-natal check-up were respectively 51.1%,36% and 40%,1n 20082013. The situation is worse-off in the rural part of the country (Okonofua, Ntoimo, Ogungbangbe, Anjirin, Imoghan, Yaya, 2018; Ahuru, 2021).

Nigeria has a tripartite healthcare system, which comprises the tertiary health care system, secondary healthcare system and primary healthcare system (Ahuru, 2020; Ahuru, 2021; Okonofua et al., 2018). The tertiary healthcare system consists of federal teaching hospitals and federal medical centres, and they render specialized healthcare services. On the other hand, secondary healthcare system comprises of state general hospitals and they are first the referral points. Primary healthcare system, which is the entry point into the country's healthcare system, is designed to provide promotive and preventive healthcare services (Ahuru and Iseghohi, 2019; Alenoghena, Isah and Issara, 2019). The Nigerian government established the primary healthcare system to provide healthcare services to people in their homes and places of work (Okonofua et al., 2018).

Nigeria's reproductive health policy is premised on ensuring the presence of PHCs in every political ward. Recent evidence shows that there are over 34,000 PHCs in Nigeria, and the PHC density ratio is put at 18 per 100,000 of Nigerian population (Ahuru, 2019; Ahuru, 2020). It is believed that every rural Nigeria woman have access to modern maternal care services because of the presence of PHCs. Despite the spread of PHCs, available evidence shows that PHCs are underutilize in Nigeria, and this accounts for poor reproductive health outcomes among rural Nigerian women (Yaya et al., 2019; Ahuru, 2020; Ntoimo et al., 2020). In Nigeria, there is dearth of evidence on factors that limit rural women's access to PHCs (Okonofua et al., 2018; Ahuru and Iseghohi, 2019; Ahuru, 2020; Ntoimo, Okonofua, Yaya, Imonghan, Omorodion and Ogungbangbe, 2020).

In the literature, both demand and supplyside factors predicate utilization of healthcare services. In their model, Ensor and Cooper (2004), revealed how demand and supply-side factors influence utilization of healthcare services. Demand-side factors are those factors that operate at the individual, household and community characteristics that influence the utilization of healthcare services (Okonofua et al., 2018; Yaya et al., 2019; Ahuru, 2020). In the contrast, supply-side factors are the characteristics of the health system which are beyond the control of

the individual, households and communities. Health system characteristics include the number of health service providers, physician density ratio, availability of drugs and basic equipment and other health infrastructures. In Nigeria, several studies have reported demand-side barriers to utilization of maternal care services (Ejembi, Alti-Muazu, Chirdan, Ezeh, Shedu and Dahiru 2004; Babalola & Fatusi, 2009) and several others have reported shortage of drugs, inadequate medical equipment, manpower shortage, weak referral system and under funding of the health system (Sambo, Lewis & Sabitu,2008; Ademiluyi & Aluko-

Arowolo,2009; Ohuabunwa,2010; Oyekale, 2017;Nnebue, Ebenebe, Adogu, Adinma, Ifedike and Nwabueze, 2014). Yet, there is dearth of evidence on how these supply constraints interact with demand constraints to discourage rural Nigerian women from utilizing maternal care services in PHCs. This study is, therefore, a report of how demand and supply-side barriers interact in limiting rural women's access to PHCs in eight rural communities in Delta State, Southern Nigeria. This study provides baseline data upon which pragmatic intervention for repositioning PHCs can be based.

METHODOLOGY

Study Settings

The study was held in Ughelli North LGA in Delta State, Southern Nigeria. The LGA lies between $9^0$45N and $8^0$43 E, and has a landmass of 818 square km.

Administratively; it has eleven political wards with a total population of 821, 028 million people (Ahuru, 2020; Ahuru, 2021; Ahuru, Anyiwe and Nzoputam, 2021).There are 105 communities embedded in the political wards (Ahuru, 2020). Evidence shows there are 30 public PHCs, 12 private PHCs and few private hospitals (Ahuru, Anyiwe and Nzoputam, 2021). The primary source of care in the area is PHCs, and farming is the major occupation of people in the area (Ahuru and Iseghohi, 2019).

STUDY DESIGN

The study is a household and facility crosssectional survey. The population of the study comprises of all women within the reproductive ages, who gave birth in the last five years preceding the study, and residing in the research communities at the time of the survey.

Sample Size Determination / Sampling procedure

The household survey recruited 900 women within the reproductive ages. The sample size was worked out using the Cochrane (1977) sample size formular, which assumed that 62.1% of women utilize antennal care services in PHCs based on the findings made by Okonofua et al (2018); 95%

confidence interval, 5% error margin; and 10% non-response rate**.** Multi-stage sampling was used in selecting the women for the study. In first stage, the local government area (Ughelli North) was purposively selected based on area of research interests. In stage two, four political wards were randomly selected from the local government area using simple ballot system. The selected wards were Agbarha-otor, Evwereni, Orogun 1and Agbarho 2**.** In stage 3, simple random sampling was used to select two communities from each of the wards; one community that has PHC and the other without. Four communities with PHCs and four without PHCs were selected. The four communities with PHCs (Agbarha-otor, Evwereni, Unukpo, and Ekrehavwe) were selected for health facility survey. Finally, household survey was conducted in the eight rural communities. The inclusion criteria for the women were: being within the reproductive age limits, consent to participate, currently residing in the communities; must have given birth in the last five years preceding the survey; or currently pregnant. Because of lack of reliable data on the number of women within the reproductive ages in the various communities, it was presumed that the eight rural communities have equal number of qualified women. Hence, it was slated that 113 women would be surveyed in each of the communities. In some cases, the targeted number of women was not met in the communities; hence the fall in the required number was made up from other communities. The highest number of women collected in any one of the communities was 132 and the least number was 87.

Research Instruments

An adapted pre-tested structured questionnaire was used in obtaining responses from the women. The questionnaire elicited information on personal data of respondents, family characteristics, reproductive history, and Antenatal, Intrapartum and Postnatal care experiences and reasons for use and non-use of PHCs. The questionnaire was adapted from Ahuru (2020), and was pretested by administering it to eight women in Emevor, neighboring community that shares similar socioeconomic characteristics with the research communities. The qualitative assessment tool was adapted from national primary healthcare development agency (NPHCDA) and was used to assess four

PHCs in three core areas of physical/business environment, human personnel, and availability of medical equipment. The site assessment was pretested by using it to assess two PHCs in another community nearby research participatory communities.

Data Collection Procedure

Five trained research assistants were used in collecting the data. Research assistants were drawn from Management and Social

Sciences disciplines and they were given two days training on ethics of research, field survey and

content of the questionnaire and qualitative site assessments. The questionnaire was administered through face-to-face interviews and was fielded in Pidgin English. During the site assessment, the principal investigator was assisted by one research assistants. While the principal investigator collected the information using the checklists the research assistants made observations and took additional notes. Data collection lasted for a period of three months.

DATA ANALYSIS

The result was analyzed by presenting the information in a tubular form and with the use of simple percentage and frequency.

Multiple response technique was used to elicit information on reasons for use and non-use of PHCs. For utilization of maternal healthcare services outside primary healthcare centers, the following options were provided: the cost of service is expensive, facilities are hardly open, providers are not always available, there was no transport, my culture forbids me, the distance to PHC facility is too far, my husband /family members disapproved it, family members discouraged me, I had no time because delivery was sudden, quality of care provided is low (subjective opinion of respondents on the quality of services rendered in PHCs), it was my choice, I was referred out of PHCs, I suffered complications, there is no PHC facility close to my home and others. Stata Version 14.0 was used for the analysis.

RESULTS AND DISCUSSIONS

SITE ASSESSMENT OF PRIMARY HEALTH CENTERS IN STUDY AREA

The supply-side analysis entails assessing the four PHCs in five critical areas of physical/business environment, availability of basic medical equipment, health personnel, technical competence and management/continuity of care.

Table 1: Business/ Physical Structure

Items	**Primary Health Care Centers**			
	Agbarha-otor PHC	**Evwereni PHC**	**Ekrerhavwe PHC**	**Unukpo PHC**
Building painted Green	X	X	X	X
Wall & roofs in good condition with functional doors & netted windows	X	X	X	X
Clean water source from a motorized borehole	√	√	**X**	√
Clearly sign post-visible from both entry and exit points	**X**	√	**X**	**X**
Staff quarters or accommodation within the community	√	X	X	X
Connected to a national grid	√	√	√	√
Alternative power source	X	X	X	X
Fence with generators and gatehouses	X	X	X	X
Physician consulting room	X	X	√	X
Pharmacy dispensing unit	X	X	X	X
Laboratory	X	X	X	X
Functional separate male & female toilet facilities with water supply within the premises	√	X	X	X
Waiting/reception areas for child welfare, ANC, Health Education, and ORT Covers	X	X	X	X

√ = available, X = not available

In Table 1 above we present the site assessment report for buildings and premises of the four PHCs in the study area. Though, all four facilities had a detached building, but none had up to thirteen rooms as requested by NPHCDA. None of the facilities was painted green as requested by NPHCDA. Three of the facilities have no clearly positioned sign posts. All the four facilities have walls and roofs in bad conditions with doors and windows not functional. Only two of the facilities have clean water source from motorized borehole. Only one of the PHCs has staff quarters or accommodation. All the four facilities were to national grid, but none have alternative power source, none was fenced and only one has physician consulting room and none has physician consulting room, and none of the PHCs has pharmacydispensing units. Functional toilet facilities were present in only one of the PHCs, and none has waiting areas for various care services. We noted that only of the facilities has physician-consulting room; hence patients were counseled within the hearing of other patients. Thus, patients' confidentiality and privacy were violated.

Table 2: Availability of Equipment connected

Items	**Number in each PHCs**				**Recommended number by NPHCDA**
	Agbarhaotor PHC	**Evwereni PHC**	**Ekrerhavwe PHC**	**Unukpo PHC**	
Boiler/Saucepan/Sterilizer	1	0	1	0	1
Foetoscope	1	1	2	1	2
Injection & Needles	5	5	6	7	5
Tape measure	2	1	1	1	1
Sphygymanometer	6	2	6	2	6
Vaginal speculum	2	1	2	1	2
TT injections	20	30	15	25	-
Thermometer	2	**1**	**0**	0	1

Examination Couch	1	0	0	1	1
Locked storage cupboard	1	0	0	0	1
Container for decontamination	2	1	0	0	1
Vacuum Extractor	4	2	1	1	1
Weighting scale(baby)	1	1	0	0	1

- **Not specified.**

In Table 2, we assessed the availability of basic medical equipment in the four PHCs and compared it against the recommended standard by national primary health care development agency. The four facilities had sufficient injection and needles and Foetoscope but two of the facilities did not have adequate number of Sphygymanometer. Simple medical equipment such as containers for decontamination, rinsing and disinfection were not available in most of the facilities. Two of the facilities had no examination couch and only two of the four facilities had a locked storage cupboard. Two facilities had vaginal speculum in recommended quantity, while two did not. All four facilities had tape measure, but two of the four facilities did not have Saucepan or Sterilizer. We found out that the facilities do not have up to date equipment and basic health care kits were either not available or in non- functional state. Basic equipment like weighing scales, Stethoscope and Thermometer were noted to be either absent or in a malfunctioning state in the assessed facilities. This implies that the facilities assessed would not be able to measure blood pressure and some would not be able to weight a newborn baby. This finding is in line with several Nigerian studies that reported inadequate medical equipment in health facilities (Sambo, Lewis & Sabitu, 2008, Abdulraheem, Oladipo & Amodu, 2012; Ohuabunwa, 2010; Ahuru, 2020). On the whole, Nigeria's health sector has been reported to be operating sub-optimally due to unavailability of human personnel, drugs and medical equipment. Omoluabi (2015) emphasized that lack of medical equipment occupies a central place among all the challenges confronting the Nigerian health sector.

Table 3: Human Personnel Profiles of PHCs in Study Area

Personnel	**Primary Health Care Centers**				
	Agbarha-otor PHC	**Evwereni PHC**	**Ekrerhavwe PHC**	**Unukpo PHC**	**Recommended number by NPHCDA**
Medical doctor	0	0	0	0	1
midwives/nurse	2	0	1	0	4
Laboratory technician	0	0	0	0	1
Pharmacy technician	0	0	0	0	1
Environmental officer	1	0	0	0	1
Medical recorder	1	0	1	0	1
CHO on standing order	0	0	0	1	1
CHEWs	2	1	2	1	6
supporting staffs	3	1	1	1	3
Security	0	0	0	0	1

In Table 3, we noted that none of the four the facilities lacked competent manpower.

In Table 3, we noted that none of the four facilities assessed had a Pharmacy or a laboratory technician. We noted that none of the facilities had a medical officer on the ground and none of them met the requirement of a minimum of four midwives and nurses. There was no medical recorder in two of the facilities. Only one of the four facilities met the minimum recommended number of three supporting staff and none met the recommended number of six community health

workers. We noted that the facilities lacked competent manpower. This finding conforms to that of Nnebue at al (2014) and Nigerian Reproductive Health Resources and Service Survey which reported a shortage of professional medical personnel in health facilities in Nigeria. This finding is in support with those from other studies that reported constraints and challenges facing PHCs in Nigeria (Oyekale, 2017; Alenoghena, Isah & Isara, 2015; Ahuru, 2020);

Reasons for non-use of PHCs by Respondents

while 118 of currently pregnant women did not utilize anc from phcs, 423 women with recent birth did not deliver in phcs. we aggregated this number of women and tagged them non-users of phcs.we elicited information from non-users of phcs on barriers to utilization of phcs as source of anc providers for currently pregnant women and barriers to utilization of delivery care for women with recent birth.

Table 4: Distribution of Reasons for not Utilizing Care from PHC facilities by currently pregnant women and women with recent birth among participants.

	pregnant women		**Mothers with recent birth**		**Combined currently pregnant women and women with recent birth**	
Reasons	**Frequency (n=296)**	**Percentage**	**Frequency (n=713)**	**Percentage (n=713)**	**Frequency (n=1,009)**	**Percentage**
Cost too much	25	8.4	98	13.7	123	12.2
Facility not open	45	15.2	61	6.6	106	10.5
Providers were hardly on ground	46	15.5	78	10.9	124	12.3
poor quality care	72	24.3	204	28.6	276	27.4
Husband/family disapproved it	49	16.6	94	13.2	143	14.2
No time because	-	-	07	0.9	07	0.69

baby came suddenly						
My Culture forbids me	09	3.0	08	1.1	17	1.68
PHC too far	32	10.8	96	13.5	128	12.7
No transport to facility	09	3.0	43	6.0	52	5.15
No PHC facility	-	-	8	1.1	08	0.79
It was my choice	-	-	3	0.4	03	0.29
I suffered complication	-	-	3	0.4	03	0.29
I was referred out of PHCs	-	-	1	0.1	01	0.09
Others*	09	3.0	09	1.3	18	1.78

*other reasons include: I do not like PHCs, I hate injection/hospital, I lack fund, nothing, fear, my choice, they referred me out of PHCs and I had complications.

In Table 4, we present the responses why currently pregnant women did not utilize ANC from PHCs and women with recent birth did not utilize delivery care in PHCs. For currently pregnant women a total of 296 responses were elicited. The three most frequently-mentioned reasons why currently pregnant women did not utilize ANC in PHCs were poor quality care (24.3%), husband and family members discouraged me (16.10%) and no provider on the ground (15.50%). For women with recent birth, a total of 713 responses were elicited from those who did not have their deliveries in PHCs. The three commonly-mentioned reasons

for not having their deliveries in PHCs were poor quality care (29.20%), cost too much (14.00%) and distance barrier (13.80%). We noted that in order of hierarchy, the predominant reasons why women do not use PHCs were poor quality care, providers not on ground, cost too much, husband's disapproval and facility not open. These same factors have been reported by past studies as barriers to maternal care utilization (Fagbamigbe and Idemudia, 2015; Okonofua et al., 2018; Ahuru, 2020). Intervention programmes with intent to increase women's access to PHCs should address the afore-mentioned barriers. We are certain that intervention programmes that address these barriers will no doubt increase women's access to PHCs.

CONCLUSION AND RECOMMENDATIONS

The study reported both demand and supply constraints in the utilization of maternal and child care services from PHCs in the rural part of Delta State. Demand and supply constraints exist in limiting rural women's access to PHCs, hence intervention designed to improve women's access to PHCs must effectively address both demand and supply constraints. There is the need for human, infrastructural and technological improvement of PHCs in the rural part of Nigeria. Facility-based interventions that increase personnel in PHCs, capacity building through training, ensure regular supply of the drug and strengthening the referral system will no doubt increase the access of rural women to PHCs in the rural part of Nigeria (Okonofua et al; 2018).

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