

UNIVERSITY OF SOUTHAMPTON  
FACULTY OF SOCIAL SCIENCES  
DEPARTMENT OF SOCIAL WORK STUDIES

THE TRADITIONAL BIRTH ATTENDANT *versus* THE HOSPITAL - A STUDY OF  
FACTORS WHICH CONTRIBUTE TO THE CHOICES MADE BY PREGNANT WOMEN  
IN OBSTETRIC SERVICES UTILIZATION IN PORT-HARCOURT, NIGERIA.

By:

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A Thesis submitted for the degree of Doctor of Philosophy

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## DEDICATION

For my loving Daddy, Rev. D.I. Ebuye-Dokubo,  
who died on 01/11/96 while I was writing up this  
thesis.

UNIVERSITY OF SOUTHAMPTON

ABSTRACT

FACULTY OF SOCIAL SCIENCES  
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Doctor of Philosophy

The traditional birth attendant versus the hospital- a study of factors which contribute to the choices made by pregnant women in obstetric services utilization in Port-Harcourt, Nigeria.

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High maternal mortality rates in developing countries has been of great concern. For over two decades WHO has encouraged member countries to train their traditional birth attendants (TBAs). This process has produced some results but has not reduced the high maternal mortality rates in view of current figures published by WHO and UNICEF. The unorthodox methods of obstetric practice by TBAs are deemed dangerous by the medical profession but their services continue to be utilized by women in the Third World. Health services utilization may be influenced by the structure of the health care system, the behaviour or perceptions of health care providers as well as the actions of potential patients. This research presents patterns of patronage and perceptions of women and care providers regarding the utilization of obstetric services in Nigeria and the city of Port-Harcourt specifically. The 1990 Nigeria Demographic and Health Survey was analyzed. In addition 700 hundred women, five obstetricians, five nurse/midwives and five TBAs from five zones of Port-Harcourt were interviewed. Reasons given for TBA patronage are; "massage", normal delivery, "affective behaviour", and flexible modes of payments. TBAs maintain that their good services advertise them with references from previous patients to new ones. The only compounding problem all TBAs acknowledged to have was one of inadequate accommodation.

The study thus confirmed the continued usage of TBA services as primary health care providers. The present high maternal mortality rates in Nigeria may not be unrelated to this pattern of use. This raises questions regarding the adequacy of the approach by international health organisations regarding the solution being in TBA training *per se*. There should be a change of focus from the TBA to the mode and adequacy of modern health services provision at least in Nigeria.

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Lauretta Dataribo Dagogo

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## ABBREVIATIONS

ADMIN -Administration  
A - Age  
AGR - Agriculture  
ALLCN -Allocation  
ANC -Antenatal Care  
ANS - Answer  
APPLT -Applicant  
BMH -Braithwaite Memorial Hospital  
CAP -Capital  
C'ATI -Civil Aviation  
CHC -Comprehensive health centre  
COMMER -Commerce  
C.S -Cesarian Section  
DEGR -Degree  
DFPRI -Directorate of Foods, Roads and Rural Infrastructure  
DK - Don't Know  
DIP -Diploma  
DOC -Doctor  
Ed -Education  
E -Expected Count  
ENVIRON -Environment  
ET AL. -And Others  
EXCL -Exclude  
EXP -Exponential  
EQU -Equation  
EMP -Employed  
EMPLYR -Employer  
FST -Forest  
GNP -Gross National Product  
G.P. -General Practitioner  
HOSP -Hospital  
HLTH.CENT - Health Centre  
INCL -Including  
IRD -Institute for Resource Development  
IRLS -Iterative re-weighted least squares



KM -Kilometres  
MED. - Medicine  
MEDIC -Medical  
MCH -Maternal and Child Health  
MGT -Management  
N -Number  
NDHS -Nigeria Demographic and Health Survey  
Nm -Number in Millions  
NM -Nurse Midwife  
HND -Higher National Diploma  
NS -Not Stated  
NUR -Nurse  
O -Observed Count  
ODHS -Ondo State Health Survey  
'OS' -Out of Stock  
P -Parity  
p -Probability  
PC -Personal Computer  
P.H. -Port-Harcourt  
PHC -Primary Health Care  
PREG -Pregnancy  
PRIM -Primary  
PRIV -Private  
POPU -Population  
PROD -Production  
PROF -Professional  
REL -Religion  
S. E. -Standard Error  
SEC -Secondary  
SCI -Science  
SERV -Service  
SECUR -Security  
SIG -Significant  
SOC -Social  
STD -Student  
TBA -Traditional Birth Attendant  
TEC -Technical

TOTL - Total  
TRAD - Traditional  
TTI - Tetanus Toxoid Injection  
T.V. - Television  
UNICEF - United Nations Children's Fund  
UPTH - University of Port-Harcourt Teaching Hospital  
USA - United States of America  
V - Versus  
WHO - World Health Organisation  
WRKRS - Workers  
XXX - Thirty  
XIV - Fourteen  
OND - Ordinary National Diploma

## Chapter 1

### Introduction

#### 1.0 Background

Historically, women receive obstetric care from women who have acquired experience in the birth process. These women are either referred to as traditional midwives or traditional birth attendants (TBAs). TBAs are usually untrained and illiterate yet many women patronize them. WHO (1966) defined maternity care to include 'measures to prevent prenatal mortality, reduce the risk of morbidity and mortality of both mothers and children, space pregnancies and limit family size and promote acceptance of health practices; taking into account the complex of activities that make up the life of the community and its system of beliefs and practices for the preservation of health'. It was, hence, presumed that current modern health services are more able to provide health services to pregnant women. However, several implementation and supply problems have eliminated the utilization of these services by those who live in rural areas.

The World Health Organisation (WHO, 1987) estimated that approximately 500,000 women die each year from pregnancy related causes, with 98.0% of the deaths occurring in developing countries. Maternal mortality rates for advanced countries like the USA and others are 10-15 deaths per 100,000 live births, but in many countries of the developing world it is in the range of 100-200 per 100,000 live births. The medical profession invariably, maintains that TBA obstetric services are dangerous (Feyi-Waboso, 1981). However, TBA services continue to be utilized by women in the Third World at alarmingly high rates either singly or in combination with modern health services.

In 1985, my previous research (Dagogo, 1985), embarked upon as a result of work with women and voluntary organisations such as the Planned Parenthood Federation recorded that:

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behaviour of a pregnant woman if she has to make a rigid choice between the two services. Having had the opportunity to do a PhD by research I decided to extend my earlier work and regard my unpublished research as a pilot study for the proposed research project. The plan includes the analysis of the 1990 NDHS data, the interview of 700 women at hospitals, health centres and at TBA residences, as well as interviewing service providers including TBAs, doctors and nurses.

This study confirms the use of TBA services from the 1990 Nigeria Demographic Health Survey (NDHS) data and the Port-Harcourt (PH), Nigeria 1991/92 in-depth and qualitative studies and obtained reasons for such patronage behaviour. It established the level of acceptability and reasons for rejection of hospital services by pregnant women. The in-depth studies were conducted through the interview of 700 pregnant women in the antenatal clinics of University of Port-Harcourt Teaching Hospital (UPTH), Orogbum and Comprehensive Health Centres, Braithwaite Memorial Hospital (BMH) and five TBA residences all in the city of PH. Out of this sample of 700 women, 30 women were followed up until delivery to observe their patterns of utilization. Service providers, including doctors, nurses and TBAs were also interviewed.

The in-depth and qualitative studies were carried out in the city of PH where there are more hospitals than in rural areas. The reason for the location of the study is to control for the commonly given reason that TBAs are being patronized because of lack of hospital facilities in rural areas or as a result of difficulties with transportation. We explored previous studies on obstetric utilization and analyzed the 1990 NDHS data, comparing the NDHS trends with current trends in the data collected in PH.

The current situation in PH, an urban city, where modern

services are available, is that TBAs are being utilized either singly or in conjunction with modern health facilities. Some women prefer to use obstetric services provided by TBAs instead of modern hospital services (Solomon and Rogo, 1988).

Below are various views expressed on TBA and hospital services provision and patronage;

"While urban centres are relatively well provided for, large sectors of the rural population (approximately 80%) have been neglected and therefore not been reached with meaningful maternal and child health care. It is in the rural areas where large numbers of women deliver without help or rely on "experienced" women for assistance in the conduct of child birth".(UNICEF/WHO, 1975).

"TBAs are often accorded high social standing in the community and are a traditional part of the culture. In many developing countries patronage trends remain much the same with the TBA seeing as much as 60% to 80% of the births" (Population Reports, 1980).

"The health needs of women and children, particularly of those living in rural areas of developing countries, are not being adequately met" (WHO, 1981).

"In Nigeria, amongst qualified physicians only 200 are qualified obstetricians of which 95% are in Federal and State capitals or in University teaching hospitals, most of which are in state capitals" (Omu, 1981).

"One fear is that TBAs do more harm than good because of their ignorance, lack of adequate training and illiteracy" (Feyi-Waboso 1981).

"Available figures for Nigeria as at 1983 reveal that in urban areas there is 1 physician/15,000 persons and in rural areas; 1 physician/50,000 population" (Ladipo, 1983).

"Traditional birth attendants deliver approximately 60% - 80% of the babies in developing countries and since they are often the only accessible and acceptable source of assistance in childbirth for a majority of women in rural areas, they will continue to respond to the demand for their services whether their actions are deemed illegal or not" (Owen, 1983).

"Thus mortality and morbidity rates remain high. The maternal mortality rate in Nigeria is 6-8/1000 deliveries in urban areas and 40-60/1000 deliveries in rural areas" (Ladipo, 1983).

"The figure for Nigeria is as high as 90% of deliveries

being conducted by TBAs" (Alabi, 1990).

From the above quotes we note that the issues are focused on availability and use of hospitals services. Urban areas are observed to have more hospitals and better staffing levels than rural areas. Another issue raised is the harmful nature of TBA services and how they have a higher patronage level. We therefore establish current situation of patronage and reasons for them.

The 1990 NDHS data indicates that the hospital is only responsible for 30% of births in Nigeria while the remaining 70% is conducted by untrained personnel, mostly TBAs. This indicates that although a lot of effort has been made, there has not been much change in the patronage patterns from the figures for 1975 or 1983.

The figures for maternal mortality continue to rise and Nigerian doctors sounded a note of warning on the very high maternal mortality rates recently on 27 October 1996 in Lagos (Medical Specialties, Infoseek; Internet). WHO *et al.* (1996) also documents that maternal mortality is on the increase with current maternal mortality figures of 1,020 per 100,000 live births in West Africa and 1,000 per 100,000 live births and 44,000 maternal deaths in 1990 in Nigeria. In 1990 alone 585,000 women died of pregnancy related causes globally, most of whom were from sub-Saharan Africa.

Any discussion relating to current trends of obstetric utilization by women in developing countries must acknowledge the existing structures of care, the value placed on children, the history of obstetric care and the social policies which have influenced the choices pregnant women make. An examination of these factors would enable a complete understanding of the situation or circumstances within which women operate. Several authors have identified the utilization of TBA services and given reasons for their patronage by virtue of their observations. This study

records reasons for utilization as given by service users and providers. Below is a description of PH.

#### **1.1.0 The place - Port-Harcourt**

Rivers State is located in the south-eastern part of Nigeria. It is one of the thirty-seven administrative areas (states) and occupies a land area, two thirds of which lies in flooded swampland of the Niger delta basin. It has 22 local government areas and a population of 4,983,857 out of which 49.7% are female (Federal Govt. census 1991). The people of Rivers State comprise of communities with five major linguistic groups namely; Kalabari, lower Niger, Ogoni, central delta and delta Edo. The predominant occupations among the natives include farming, fishing, trading, weaving, carving and pottery. Most people are Christians.

Port-Harcourt, the capital city of Rivers State is a modern town founded in 1913 by the British colonial masters. It serves as the junction between the riverine and the upland areas of the state with a population of about 2,500,000. PH also serves as the focus for most of the oil industries, housing giant petroleum refineries, petrochemical complexes and a fertilizer plant.

The tropical rainforest vegetation and the delta environment pose serious health problems for children as well as adults. Rainfall occurs every month of the year with peaks during the rainy season between June and September. Below are the maps of PH and Rivers State.

#### **1.2.0 Structure of the thesis**

Chapter 2 reviews current literature on utilization, women, health policy and structure in Nigeria. In Chapter 3 TBA and hospital practice in Nigeria are discussed in detail. Chapter 4 gives details of the methodology applied in the study and records the procedures for data collection and the



attending successes and difficulties encountered. Chapters 5, 6 and 7 analyzes the NDHS, in-depth and qualitative studies respectively. Chapter 8 has the conclusion and suggestions for further research.





## Chapter 2

### Literature Review

#### 2.0 Introduction

In this chapter literature on factors which contribute to women's choices of obstetric service utilization is reviewed. The historical emergence of modern medical services in the Third World, as well as utilization of hospital and traditional birth attendant services independently and concurrently, termed 'dual utilization' are given particular reference. In this thesis dual utilization refers to a process whereby women use more than one form of service simultaneously or concurrently. This pattern is particularly implicit in the use of traditional and modern obstetric services.

#### 2.1.0 Factors in choice of obstetric service utilization

Any discussion relating to current patterns of obstetric service utilization by women in developing countries must acknowledge women's status; their economic situation, the value placed on childbearing and children, the existing structures of care, the history of obstetric care and social policies which may influence the choices pregnant women make. An examination of these factors will enable a clearer understanding of the circumstances within which women make their choices. These issues are discussed fully in the subsections below.

#### 2.1.1 Women in Port-Harcourt

Women constitute nearly 50% of Nigeria's population (Federal Office of Statistics, Nigeria *et al.*; 1991), but 80% of them live in rural areas and are illiterate (World Bank, 1980). Port-Harcourt being the capital of Rivers State has similar male/female ratios. Western education was established in Bonny (a sea port), Rivers State, Nigeria as early as 1864 by missionaries (Dienye and Kosemani, 1989). The first boy's secondary school was built in Bonny in 1890 and from that

time on, several other secondary schools were built for boys, but the first girls' secondary school was not set up until 53 years later. The figures for 1984 show that Rivers State has a total of 1,119 primary schools and 267 post-primary institutions, the latter including 19 teacher training colleges, 5 technical vocational institutions and the rest being secondary schools. The enrolment figures given for primary schools to that year are 369,363 (185,398 males, 183,965; females). However, in the post-primary institutions the figures changed in favour of males, out of a total enrolment of 99,264 students, 57,896 were males and 41,368 were females (Tamuno, 1989). What the statistics did not reveal was how many of those students completed their term in schools and in what sex ratios.

The life of women in Port-Harcourt may be summarised as one subjected to male dominance and subservience, placing a lot of importance on marriage and childbearing. One positive factor which may have resulted from the existing structure is women's economic independence. Women constitute 70% of the agricultural labour force (World Bank 1980) presumably because they do not have the same educational opportunities as men. Women no longer look up to men to provide for them or their children; they work or trade, arrange child care and have no restrictions as a result of family commitments. The positive value of this independence being the possibility of women being able to purchase obstetric services independently, through economic empowerment. The difficulty with this hypothesis may be the continual conflicting need for women to choose between providing for their children and purchasing obstetric services for themselves. This may have resulted in the observed high frequency of late antenatal registration by women. However, the dominance and exploitation of women is being resisted with more education and civilization. There is a new trend among women (educated and illiterate) deciding to have their babies out of wedlock, possibly encouraged by the Nigerian

constitution which provides that no child is illegitimate (Federal Govt. of Nigeria, 1979). This provision has therefore, indirectly increased the rate of obstetric services utilization for potential childbearing women. However, the value placed on marriage is still maintained through discriminatory official maternity regulations in favour of married women. Consequently working women make non-authentic claims of marriage in daily newspapers, to qualify for maternity leave with pay. The tremendous value placed on children and marriage cannot, therefore, be over-emphasised. Below are records of some changes in the role of women in Nigeria.

### **2.1.2 Women's brighter future**

Recent policies advocated by government have raised the economic and social profile of women in Nigeria. The Better-life programme for rural women was set up by the Federal Government in 1987. The programme, directly supervised by the wife of the President and Commander in Chief of the Armed Forces of Nigeria and all wives of Military Governors, is largely funded by government. The programme enhanced the economic status of rural women through the recognition and establishment of small businesses based on women's traditional skills. Rural women have formed cooperative societies which enable them to obtain soft loans and build small scale businesses. They benefit from exports of their products and participate in international trade fairs.

The government set up a National Commission for Women in Nigeria (Federal Government of Nigeria Gazette, 1990) and appointed two women Deputy Governors. The history of the need to create a commission for women dates back to the "United Nations General Assembly Resolution 3320 (XXX) and 3523 (XXX) of December 1975 which called on member nations to accord special attention to government programmes and projects aimed at the full integration of women in

development". As a follow-up action the 1975-1985 decade for women emphasized the need for all concerned to focus attention on women's issues. Among the eight functions assigned the commission, the third is to "promote responsible motherhood and maternal health of women". This is significant and shows the concern of government and some international bodies about the continuous high infant and maternal mortality rates, part of which has been attributed to the patronage of TBAS. Patronage patterns are thus important in the development of Nigeria and this is why this research on TBA patronage was carried out.

"Where maternal mortality is highest, approximately half a million women die every year, not of disease but of the complication of childbearing and over 10 million children die every year in the developing world before reaching their first birthday (Owen, 1983)".

Below is a discussion of the history of medical services in P.H. This marks the co-existence of a dual health system resulting into current patterns of utilization in P.H.

#### **2.2.0 History of medical services**

Historical records and studies indicate that the emergence of Protestant and Catholic medical missions in colonial Africa although primarily meant for colonial and military personnel and other Europeans (Myrdal, 1968) eventually provided additional opportunities and choices of health services utilization for Africans (Witty, 1922; Hailey, 1957; Foster, 1970; Good, 1991). Nigeria's first hospital; Sacred Heart at Abeokuta was built in 1895 by a catholic mission (Schram, 1980). In P.H. the first hospitals were the Niger hospital, the Braithwaite Memorial Hospital and the General Hospital (now Teaching Hospital), all built by the British colonial masters. This marked the co-existence of traditional and modern health services which is termed 'medical pluralism' (Leslie 1976; Minocha 1980; Bannerman et al. 1983; Good 1987).

Medical pluralism, Ojanuga et al. (1982) suggests, has resulted in four types of health care consumers in Nigeria; there are those who utilize either traditional or modern medicine exclusively, those who either utilize the modern after dissatisfaction with the traditional, or vice versa and finally those who use both services simultaneously. They emphasize the waste of economic resources in the duplication of usage and shuttling between services. Such health behaviour does not afford users the benefits of either system and gives the wrong image of the modern practitioner who is frequently faced with late referrals and does not always have successful results. They advocate integration of traditional and modern medicine under the auspices of government to check waste of economic and staff resources as well as exercise control in the practice. Their study confirms the observation of this study but they did not study the reasons for such health behaviour and failed to realize the presence of medical pluralism and shuttling even within use of modern medical services. Heggenhougen (1980), for instance, asserts that medical pluralism could be within both modern and traditional health services. This may be due to lack of uniformity of practices within different and similar systems as well as patients' choice, proximity and other factors resulting in patients going around from one practice to another.

Good (1987), maintains that in virtually every African country the influence of traditional medicine is extensive and comes second only to self treatment. The emigration of TBAs into urban areas indicates their ubiquitous nature. In Swaziland for instance, about 85% of the population utilize traditional services. In Port-Harcourt there exists two strongly competing systems of health care delivery: the traditional and the modern. Below is a description of Nigeria's policy and health structure.



### **2.2.1 Nigeria's health policy**

The aim of the Nigeria health policy was to make available a generally affordable, accessible and acceptable health care package to the populace through community participation and utilization of community resources (Adeokun, 1985; Egwu, 1988). Having signed the Alma-Ata Declaration on 'Primary Health Care' (PHC) as the apex of health care policy for developing countries in 1978, the attainment of the goal of 'Health For All by the Year 2000' has been accepted by the Nigerian government as one of the fundamental objectives of state policy (World Health Organisation Regional Office for Africa, 1975). It has thus been officially recognised that hospital-based services alone cannot meet the needs of the majority of Nigeria's population since the mid 1970s. The government started its implementation of total health coverage with the provision of 285 Basic Health Units, each with a 60-bed comprehensive health centre, which acts as a referral point for a target population of 150,000. The comprehensive health centres (CHCs) were to depend on four primary health centres, each serving nearly 40,000 people as well as being a reference point for a network of five health clinics which were the first stage of delivery of promotive, preventive and curative care in the system (Adeokun, 1985).

The declining economic situation in the 1980s led to a fall in the implementation programme in 1984. The Federal Ministry of Health retained its authority in PHC implementation as well as coordinating the activities of the state-based units within each of the four health zones (Northeast, Northwest, Southeast and Southwest). However, only 52 selected local government areas (LGAs) (out of 301 by 1986) were designated PHC model areas for the purpose of executing the programme and ultimately extending the models to cover the whole country by the year 2000 (Egwu, 1988).

### **2.3.0 Health care system in Nigeria**

Nigeria proclaims the responsibility of health care

provision for it's populace. An official proclamation of this responsibility is documented in the 1975 National Health Policy of the 1975-1980 National Development Plan. The administration of the governmental medical service is the responsibility of the Federal Ministry of Health through the formulation and implementation of health policy. State Ministries of Health have similar functions but are financially dependent on the Federal Ministry. The Nigerian Health Care Delivery system was initially hospital based with health institutions forming the nucleus of the health delivery system while medical doctors worked as employees in government-owned hospitals. The figures as at 1980 were 4958 health establishments with a combined capacity of 42,698 and a patient ratio of 1/1700 (Third National Development Plan, 1975-1980). This policy was upgraded into the Primary Health Care (PHC) programme during the 1981-1986 National Development Plan. Invariably maternal and child health has been the focus for health care planning in many developing countries for decades. Pregnant women are faced with services from trained and untrained personnel in hospitals, at the TBA residences and other places respectively. (Brink 1982; Bannerman *et al.* 1983; Owen 1983; Good 1987; Leslie and Gupta, 1989; WHO 1981). The traditional structure among others, includes the traditional or native doctor, the TBA, and the prayer house, also called church or mission while the modern comprises of the hospital, clinic, health centre and maternity homes. However, the focus of this study is the choice between the modern medical structure and the TBA. Sometimes it is necessary to distinguish between the TBA and the Church or Mission as their practices do differ significantly and the latter is deemed more dangerous than the former by medical practitioners. Adetunji (1992), however suggests benefits could be yielded by cooperating with the churches and viewing them as transitional between the TBA and the modern.

Before analyzing the state of knowledge about hospital and

TBA utilization if may be useful to understand the range of maternity services available in Port-Harcourt. The following section describes details of maternity services and levels of expectations in meeting the needs of pregnant women.

### **2.3.1 Maternity care services**

Below are a documentation of the various institutions or places where women access maternity services in Nigeria and specifically in P.H.

### **2.3.2 Teaching hospitals**

Teaching hospitals in Nigeria are run by universities and have the most qualified personnel and equipment as they serve a dual purpose of treating patients and training future medical personnel. They are very expensive to run and are heavily subsidised by federal and state governments. They operate in a hierarchical structure with the consultant at the top and the card issuer at the bottom. Details of the hierarchy show a movement from the card issuer, the student nurse, to the staff midwife and sister through the house officer, senior house officer, registrar and senior registrar to the consultant; this excludes the interactions of the patient with the laboratory, the pharmacy and other departments.

There are twenty teaching hospitals in Nigeria of which one is the University of Port-Harcourt Teaching Hospital, situated in the centre of town making it accessible through bus/taxi routes and by water. A permanent site, nearing completion at the outskirts of town is being built within the University complex for the convenience of students, and doctors who are also lecturers at the University.

In Port-Harcourt, the services for pregnant women start as early as 7.00 am and end at 2.00 pm on five daily clinics per week, run by different consultants with admission facilities. However, at the close of the clinic, there is a

casualty service for emergency cases. It is extremely important for a woman to be at the clinic before 9.00 am otherwise she would be too late to register for that day. Women are advised to register within three months of pregnancy. This process is referred to as the "Booking Clinic".

At registration a pregnant woman attends tutorial classes which provide her with the required knowledge for her pregnancy. She is then given a series of medical tests, and her case history is taken before she sees a House-Officer, but may not see the consultant until she delivers. Only women with complications during antenatal care or labour are referred to and seen by the consultant. However, women feel dissatisfied with the process because the consultant is seen as the pivotal of knowledge. This feeling is exacerbated by nurses doing the screening, as they routinely allow their friends and relatives see the consultant. It is not clear what this process has on utilization.

The registration fees for pregnant women have fluctuated between 50 naira and 200 naira as at 1991. These fees are not easily affordable as the monthly minimum wage at the time was 500 naira, and may contribute to late registrations, many, as late as the 7th month of pregnancy. Drugs supplied free are frequently not in sufficient supply as previously discussed. This short supply is referred to as the OS syndrome - OS meaning "out of stock". It is worth noting here that for TBA service, women readily pay between 5 naira and 10 naira on monthly or more frequent intervals for massage at TBA residences, exclusive of a payment of 100 naira care in the pregnancy and additional delivery fees. A possible explanation for this discrepancy in attitude could be the flexibility in TBA payments as discussed in Chapter 8.

### **2.3.3 General hospitals**

General hospitals are easily accessible nationally and similar to teaching hospitals but not structured for training. There is only one general hospital in Port-Harcourt, the Braithwaite Memorial Hospital (BMH). It runs outpatient services from 8.00 am - 2.00 pm and has admission facilities. Registration and drugs are charged but consultative services are free. The 'OS' syndrome also exists.

### **2.3.4 Civil servants clinic**

This service is unique to Port-Harcourt and strictly meant for civil servants and their dependants including pregnant women who are referred either to the teaching or general hospitals. The clinic is situated at the headquarters of the state civil service secretariat for the convenience of staff. It operates only during working hours of 7.30 am to 3.30 pm. It is a free consultative service while drugs are charged.

### **2.3.5 Health centres**

Health centres provide special clinics for pregnant women on a daily basis and are run in stratified areas. Their classifications take cognisance of the 24 different local government areas in Rivers State and are run mostly by nurses. They give first aid treatment and refer serious cases to the hospitals. The services are completely free but the 'OS' syndrome inevitably exists. The centres were established to improve access to services because of travel within the difficult terrain of the state. A major part of the state is full of creeks and swamps and makes travel difficult.

### **2.3.6 Private hospitals/ clinics/ maternity homes**

Private hospitals, clinics and maternity homes are government registered and provide services for pregnant women but are more expensive. They provide 24 hour service

and attract patients with the aesthetics of their centres and personal attention. There are over 300 in Port-Harcourt (Ministry of Health, 1990).

#### 2.3.7 TBAs

WHO (1975) refers to the TBA as "a person (usually a woman) who assists the mother at childbirth and who initially acquired her skills delivering babies by herself or by working with other Traditional Birth Attendants". She is commonly found in rural areas rather than in urban areas. TBAs are usually untrained and illiterate but many women patronize them sometimes combining their services with those of the hospital. Some women prefer to use obstetric services provided by TBAs instead of the modern hospital services because of the mode for placenta disposal (Solomon and Rogo 1988).

Most TBAs in P.H. learn their skills from their parents (fathers as well) while a few learn from a non relative under an apprenticeship. Note that there are also male TBAs. It usually takes about 6 months to 3 years for the apprenticeship depending on the learner's intelligence. The TBA service was a predominant rural practice but there is evidence of urban migration and practices in the city along side modern hospital facilities. In Nigeria, TBA services are provided in big cities like Lagos, Calabar, Port-Harcourt and others. In Port-Harcourt, TBA consultations begin in the early hours of the morning (5.00 am - 12.00 pm) and in the evenings (4.00 pm-6.00 pm), but are also available 24 hours of the day and home visits are inclusive. The services include treatment of infertility, massage, turning of breach presentation babies and assurance of natural birth per vagina. The charges vary from gifts to fixed delivery charges sometimes with male costing more (girls 150 naira; boys 160 naira). The charges for massages range between 5 naira and 10 naira, a service many women say gives them relief from pain. Meals are prepared for patients

for which they have the option of instalment payments. There is a register of TBAs in rural areas but excludes the figures for Port Harcourt, perhaps with the erroneous notion that TBAs are still a rural phenomena. A realistic estimate is that there are about 100 TBAs in Port-Harcourt. Details of TBA practice are discussed later in Section 2.7.

#### **2.4.0 Effectiveness of the health care system**

Assessing the effectiveness of the Nigerian health care system would mean measuring the extent to which it has attained the WHO's strategy of 'Health For All by the Year 2000' which contains the following guidelines;

- (1) safe water in the home or within 15 minutes walking distance and adequate sanitary facilities at home or immediate vicinity;
- (2) immunization against diphtheria, tetanus, whooping cough, measles, poliomyelitis and tuberculosis;
- (3) local health care including availability of at least 20 essential drugs and family planning services within one hour's walk or travel; and
- (4) trained personnel for attending pregnancy and birth and caring for children up to at least one year of age (WHO, 1981).

This research is primarily focused on (4) the availability and utilization of trained personnel by pregnant women. The actual access of women to trained personnel during pregnancy, childbirth and postpartum seems appreciable, for instance, during the first half of the 1980s, when about 35% of mothers had their births delivered by trained personnel and by 1990, the delivery utilization had risen to 39% (Federal Office of Statistics, Nigeria *et al.*, 1990).

Some of the major pitfalls of the health care system in Nigeria include the inequity of distribution of the health services and staffing levels (WHO Regional Office for Africa, 1987). Very little change occurred in the 1980s in

the attempt to relocate resources from the hospital-based curative units to community-based preventive and promotive services although there are a few states where the distribution is far less skewed than in most parts of the country (Idachaba, 1985). Thus in 1986 the Federal Government spent 70% of its total annual health budgetary allocation on mainly urban-based curative services (Abdulrahman, 1989). There, thus, remains the continued dominance of urban-based curative services.

It has always been acknowledged that government health services are notorious for constantly lacking or being short of drugs, breakdowns of vaccine storage equipment and general inefficiency (Abdulrahman, 1989; Ransome-Kuti, 1986). For much of the 1980s the annual health budget fell far short (fluctuating between 1.8 and 3.9% of the actual total budget outlay) of the 5% of the Gross Domestic Product recommended by WHO, alongside persistent and rapid devaluation of the naira (Abdulrahman, 1989; Achime, 1989). Thus for most Nigerians who can afford it, private modern health services, and for many who cannot, patent medicine dealers (legal and illegal), or traditional medical practitioners, are a first option in times of serious illness. As at 1981/82, 31% of all hospitals in Nigeria were privately owned and run by non-governmental organisations or individuals, rising to 35% in 1986 (Federal Office of Statistics 1986).

The dichotomy between choice of modern health care on one hand and a traditional one on the other is often quite evident. The choice of a modern therapy may be as a result of failure or dissatisfaction with a traditional solution or vice versa, thereby making the multiplicity of patients' choice go beyond 'doctor shopping'. The presence of modern health services provides an opportunity of choice for women and empowers them as decision makers. This could be particularly important to women who nearly always experience



male dominance in Nigeria. It would be interesting to know how much control men have, if any, in women's choices of utilization. Zambrana *et al.* (1991) in their study of racial-ethnic women noted early initiation of prenatal care and high attendance with women who resided with their partners.

Several authors have identified features which characterize health and health care in the Third World. The World Bank (1980) identified them to be availability and accessibility, systematic factors and training, inter-sectoral and coordination features, political and social importance, and environmental conditions. These features depict themselves in the format of service delivery. For example, an examination of the spread of medical personnel in Nigeria shows that as at 1983 urban areas had a ratio of 1 physician/15,000 persons while in rural areas it was 1 physician/ 50,000 population, (Ladipo, 1983). Among these physicians only 200 are qualified obstetricians of which 95% are in federal and state capitals or in university teaching hospitals most of which are in state capitals (Omu, 1981).

#### **2.5.0 Factors affecting hospital utilization in the Third World**

Utilization is the outcome of many variables and factors, visible and hidden, which act at different stages at which the patient makes decisions about usage as well as considering the outcome of complex interactions. The complexity in predicting behavioural outcome becomes more obvious in the Third World, where medical pluralism as well as other intricate belief systems dominate decision making in choices of utilization. This may explain why very few empirical studies on utilization have been carried out in this part of the world (Phillips, 1990). The possibility of combining a dynamic process consisting of different stages at which the patient makes decisions as well as considering the outcome of complex interactions of determining factors

may be a viable way to the study of utilization.

Presern's (1996) study of reproductive health care in poor urban, (semi-rural) areas of Nepal indicated some findings including:

- 1) The identification of mother-inlaws as obstetric service decision makers,
- 2) Religion (especially islam) being associated with less hospital usage and more of home deliveries,
- 3) The Caste system serving as a deterrent to hospital utilization,
- 4) Women placed a high premium on quality of care,
- 5) In some communities TBA services cost more, but women perceived hospital service as more expensive,
- 6) A separate cord cutting service exclusive of TBA services existed,
- 6) Nurses' bad attitude put women off hospitals and
- 7) Women chose TBA service because of a comfort value.

Presern's study concentrated on births per se of women who had already used TBA services and not on antenatal care. She concluded in her study that TBAs did not provide antenatal care. Her study also focused on lack of service options, (availability) and inability to purchase care. Presern is of the opinion that educated women do not use TBA services which were becoming unpopular and likely to phase out.

However, when utilization patterns are studied in developing countries, Kroeger's (1983), conceptual framework of health seeking behaviour may be a good starting point. Kroeger groups determinants of utilization in three broad categories;

- (1) Predisposing factors including age, sex, household composition and size, ethnic group affiliation and education,
- (2) Characteristics of illness, expected benefit from treatment and beliefs about disease causation, and

(3) Characteristics of the health care system, including cost and quality of care.

However, other factors associated with health care utilization include marital status, quality of care and cultural issues to mention a few. These factors are further discussed in detail in section 2.5.

Freidson (1960, 1961) reports a link between social network structure and health care utilization. Possible explanations of such utilization patterns could be the desire to get pregnant, and the experience of related symptoms of pregnancy heightened by strong ties with one's relatives and proximity to them. Conversely, there are other factors which inhibit those who want to utilize modern health services. Non-utilization or under utilization of health services in developing countries have usually been associated with several implementation and supply problems experienced by those who live in rural areas. In other words, utilization or non-utilization of modern health services is determined by availability. A large number of vulnerable members of society such as childbearing women, infants and children are beyond the reach of the centrally organised health care system. Women in Port-Harcourt present a different prevalence of specific pathologies, give less attention to symptoms and to preventive measures as the health system is usually not well adapted to respond to their characteristics. They, therefore, depend on the locally organised or traditional health care system, of which the TBA is one of the principle elements. Below are factors identified to affect hospital utilization.

#### **2.5.1 Availability and accessibility**

Major service factors are often grouped to include availability, cost and quality of care, with availability comprising two main issues: the physical presence of services and the physical and social accessibility.

Clearly, accessibility though frequently used is not amenable to a single definition. It could be associated with the physical location of a service, or the ability, knowledge, mobility, or time or any combination of these factors to reach a service. If a service is not tailored to the needs of its populace but a direct importation of a foreign model meeting different disease patterns it may not be easily adopted by the new targeted population. Use of prenatal services may also be limited by availability of providers, inefficiency and poorly organised health care delivery systems. An understanding of these factors becomes necessary when reasons for utilization patterns are elicited. For example, women from certain environments or cultures may be at risk because they are unaware of possible preventive measures as well as the value of such services. Thus, the co-existence of psychosocial as well as physical factors is fundamental to utilization. In other words, there are factors which predispose or enable utilization. Rosenstock (1960) emphasizes the psychological readiness to seek a service based on the conviction of need, as well as the removal or reduction of barriers such as distance and cost to name a few. Psychological readiness may include pregnancy planning and desire and as well as perception of seeking health care when ill. Unwanted pregnancy has been associated with inadequate prenatal care, delay in initiation of prenatal care or attendance to problems affecting the pregnancy, use of alcohol and cigarettes; all of which may result in low birth weight outcomes or other problems (Joyce *et al.* 1992;). In P.H. this factor is likely to be hidden in any study as women may not readily admit that a child was not wanted because of the high value placed on having children.

Availability has often been seen as a fundamental issue in terms of health service utilization. Harpham *et. al.* (1988) suggest that for a rural population unavailability is associated with distance while for poor urban dwellers

modern health care may be quantitatively, qualitatively or economically unavailable. From Harpham *et al.*'s argument it is presumed that if health services were qualitatively, quantitatively and economically available the urban poor would maximise their utilization. It is however, unclear if they have given consideration to the effects of culture, education and other factors, which may outweigh the ability to purchase health services. Their argument thus excludes the relativity and subjectivity of the definitions of quantity and quality, which could be perceived differently by providers and utilizers.

Availability is an issue in health care utilization but may not be the sole or most important consideration for utilizers especially pregnant women. Information from many developing countries reveal levels of coverage, which reflect factors related to the supply of services ("service factors") and those related to utilization ("user factors"). Leslie and Gupta (1989) show wide variations within and between countries and world regions. However, where data on both prenatal and delivery care are available for the same population, the percentage coverage of the former is almost invariably higher than that of the latter (Royston and Ferguson, 1985). It is suggested that this reflects different patterns of utilization of prenatal and delivery services rather than differences in the availability. It is usually difficult to separate the two.

Leslie and Gupta (1989) also suggest that the key determinants of utilization are physical distance, hours of availability, transportation difficulties, waiting times and adequacy of medical supplies. However, they conclude from a review of numerous studies that service-related factors are more significant barriers to utilization of maternity services than user-factors. If this is the case, then the concern for TBA patronage could easily be resolved through the enhancement of the 'Service Factors' by health

professionals. For example, Briggs (1988) suggests that many women did not book for antenatal service in the Port-Harcourt Teaching Hospital, despite its availability, consequently arriving with a ruptured uterus and increasing the maternal mortality rate.

Similarly, although many studies have linked unavailability of modern services as one of the key reasons for patronage of traditional practitioners, Heggenhougen (1980) observed no marked 'distance decay' as patients travelled longer distances to see a traditional practitioner than they would for a modern medical practitioner. A possible explanation for this attitude could be that the patients perceive a high quality of care as well as trust and faith in the provider who is thought to be at least temporarily irreplaceable. This research seeks to reaffirm the significance of such utilization patterns in Port-Harcourt where modern facilities are readily available, directly from pregnant women themselves.

### 2.5.2 Distance

Physical distance has repeatedly been identified as a primary deterrent to the utilization of general health services (William *et al.* 1989, Attah 1986). However, where there is a good road network or cheap public transport its effect will be less severe. Freeman *et al.* (1983) for example, found that clients living farthest away from a family health centre in Nigeria, used the service more often than those living closest to it. The explanation for this observation lay in the higher socio-economic group of the more distant patients who also had access to transport, whereas the closest and poorer patients only attended if they were able to walk the distance. WHO (1988) also observed the effect of distance to vary in the utilization of preventive and curative services, with curative assistance uptake being perceived as of necessity, thereby overpowering the distance involved. Thus, if a woman does

not perceive pregnancy as an illness and she is not in any discomfort, then she may not make an extra effort to travel and seek antenatal care. On the other hand if she is anxious about the state of her pregnancy then distance may not constitute a barrier to her utilization of services irrespective of where the services are located.

Sometimes distance could also be a reflection of cultural constraints of female mobility. This could also be termed 'social distance', referring to the social comfort and acceptability of use. For example, if a clinic is situated in a marketing vicinity where women shop regularly, though far away from their residences, there is likely to be high attendance at the clinic. Conversely, where a clinic is physically close and women require male escorts, frequency may depend on escorts' convenience. Other factors include mode of transport, cost and ease of movement together with seasonal variation. The absence of these factors may cause distance decay - less use of the services provided due to it's location. For example, Stock (1987) found a regular distance decay in the utilization of pharmaceutical services in Kano, Nigeria, by 25% for every additional kilometre to the facility.

Similarly, Larsen *et al.* (1983) suggests that poor infrastructure and lack of medical staff are two main problems that beset rural obstetric services in South Africa. They concluded that poor and inadequate infrastructure left pregnant women at the mercy of TBAs available to them. Another study by Marshall (1985) in Papua New Guinea found that fewer women in Central Province attended antenatal clinics in Port Moresby General Hospital as distance increased, especially if it was beyond 5-6 kilometres. Thus distance is an important factor in utilization studies, but may be compounded by socio-economic and cultural factors including health care beliefs and expectations.

### **2.5.3 Age and parity**

Consideration of 'user factors' highlights the importance of maternal age and parity. The greater confidence and experience of older and higher parity women, together with greater responsibilities within the household including child care have been suggested as explanatory factors for their tendency to use services less frequently (Kwast, 1988). St. Clair *et al* (1989) argues that parity is a strong predictor in prenatal care utilization with multiparous women being far more likely to under-utilize than primiparous women for various reasons such as experience and confidence. The emphasis here is under-utilization rather than type of utilization which is the focus of this study.

The easy assumption is that older people are more likely to use traditional services in Nigeria than younger people. But studies conducted in other developing countries such as Kenya by Good (1987) show that a majority of the clientele of the traditional practitioner were of the 20-40 years age group. But where services such as PHC programmes are targeted at children, they tend to be the larger utilizer of modern medical facilities. However, it could be argued that because elderly people are the custodians of culture and traditions and are more familiar with traditional medicine they were more likely to trust and utilize traditional medicine. Thus the pattern is inconsistent as age does not have a clear independent influence on utilization.

### **2.5.4 Education**

Maternal education has been repeatedly shown to be positively associated with the utilization of modern maternity care services, although the underlying mechanisms are poorly understood (Cleland and van Ginneken, 1989). One possible explanation for the association, may be that schooling up to secondary level, increases the exposure of women to western values, knowledge of human anatomy and its



functions, as well as needs in pregnancy. This knowledge could create mistrust and fear of TBA service utilization.

Wong *et al.* (1987) also observed that amongst the women of Cebu in the Philippines, improved education was associated with increased use of modern prenatal services. Similarly, Elo (1992), records the positive effect of education in maternal service utilization in Peru but notes differentials by place of residence. Elo (1992) also emphasizes the urban/rural dichotomy, thus ending with the frequently stressed need for service availability to enable utilization in rural areas. A possible explanation for such increased patronage could be that women with higher education were more likely to live in urban areas, away from their elderly relatives which may reduce the pressures of observing cultural modes of utilization. This argument does not fit the observation of some highly educated women in Nigeria who patronize TBAs in urban areas and cities where there is more provision of modern facilities. Mu'Azu-Alti (1985) observes that university graduates use TBA services in northern Nigeria. Similar observations were made in Port-Harcourt by Dagogo (1985) and in the current study. Akin *et al.* (1985) and Stock (1985, 1986) have observed better health care levels in urban rather than rural areas. For instance, Stock's (1987) study of Kano State, Nigeria, found that 85% of the medical facilities and personnel were located in Kano the capital city, which had only 10% of the population, leaving the rest of the state with only 15% of medical services. Caldwell and Caldwell (1988) also observes that schooling enhances the woman's knowledge of modern health-care facilities, improves her ability to communicate with modern health-care providers and increases the value she places on good health, which results in heightened demand for modern health-care services. However, education does not seem to have advanced the stage at which prenatal care is sought. Marshall (1985) did not find much difference in the timing, during pregnancy, of antenatal visits by educational

attainments in Port Moresby, of Papua New Guinea. Although it could be argued that other restraining factors such as employment or trade may have contributed, such delays may also be linked to the cost of registration fees.

One possible argument is that, although education is important and does broaden women's views, their choices of patronage in obstetric service utilization may have shifted to result orientation and quality of care. Women may desire to have a more result oriented service; for example, a woman may want relief when she is in severe pain in pregnancy, irrespective of who the provider of the service is. This may explain why, although TBAs do not advertise themselves, they claim to have increased patronage even in urban areas and cities. It may also explain why some women have selective or dual utilization patronage patterns. They may be selecting what they think is suitable, safe and useful in both services. This could logically be explained in the exhibited attitudes, as women go for massage at the TBA's, take tetanus toxoid at the hospital and may deliver either at their homes, the TBA's or at the hospital, depending on how they view the particular birth, irrespective of their level of schooling or education. When I was pregnant for my third child I had very severe pains in late pregnancy and could not get out of bed without help and my mobility was greatly impaired. My gynaecologist gave me paracetamol and explained my experience to be due to change in age and parity. My colleagues and friends advised I saw a TBA and I was tempted to do so. However, my husband, also a medical doctor dissuaded me from doing so.

We speculate that what influences women most is 'related information of personal experience' through narration from friends but anticipate that public awareness campaigns with regard to what is most effective, workable, safe and reliable could overtake the current pattern. Schultz (1990) has already recorded the importance of public campaigns in

the differentials in child mortality by maternal education being far less pronounced in countries with strong public health programmes, such as Costa Rica and Cuba. The role of husband's education in this relationship surprisingly has received limited attention. Similarly, the intuitively obvious links between previous use of health services and uptake of maternity care, and between access to information and uptake have yet to be fully explored (National Academy of Sciences, 1988). Thus people of higher socio-economic classes who take on traditional services singly or concurrently may be doing so because of their perceptions of the gains from each service and its monopoly of provision. For example, in the case of pregnancy, the TBA alone provides massage while the hospital alone provides immunization or Caesarian sections. However, Ramesh and Hyman (1981) maintain that traditional medicine may be particularly important to the urban poor and those living in the periphery, most of them being newcomers to the city or it's environs.

#### **2.5.5 Time and income or cost**

In Nigeria, state or publicly funded health care, excluding maternity care, is free and only nominal medication and registration charges are made. The reason for exclusion of maternity care is not clear but may be related to the stipulated number of four children allowed per woman. However, there is a popular usage of private health care, modern or traditional for perceived better quality. Two other user-related factors, income and competing time demands, show inter-dependent effects on utilization. For example, a woman who attends a distant antenatal clinic would not only incur travel costs but also lost time at work and the inconvenience of the journey and waiting time for a check up. Limitations on women's time have emerged from several studies as the most important determinant of utilization from the user's perspective (Leslie and Gupter, 1989; Zambrana *et al.* 1991). For example, women who daily

have to face the problem of providing enough food for their families, have less time to take care of their own health. Leslie and Gupta (1989) feel the key determinants of under-utilization to be physical distance, hours of availability, transportation difficulties, inadequate supplies and long waiting times. They conclude that overall, limitation on women's time is the most important determinant of utilization from user's perspective because of competing with other demands such as child-care, food preparation, and other household chores. They also observe that women in higher socio-economic groups tend to exhibit more frequent use than women in lower socio-economic groups, but other factors such as education and access to transport are potential confounders. The above conclusion may well be true but does not conform with current observations in Port-Harcourt. The practice there is that women have made alternative provisions for both child-care and other household chores either through the employment of cheap or free house girls or nannies who live in with them and do all the chores. This relieves them from the pressure or anxiety of spending long waiting hours in clinics. The other issue that would have affected women during long waits is hunger, but the sale of food in the hospital outpatients clinics by private mobile restaurants eliminated that need. The possibility and ease for such arrangements may be among several reasons why a majority of mothers work outside their homes in Port-Harcourt.

The natural presumption is people who cannot afford modern services would rely on a denuded public sector as an alternative or in conjunction with a wide range of other services including self-treatment and traditional services. On the contrary, Chen's (1987) study in Malaysia did not find any strong links between cost and utilization pattern among Tamil workers who preferred to pay for traditional Indian services rather than obtain a free modern medical service. Similarly Mwabu (1986) concluded from his study in

Kenya that factors other than costs influenced utilization. Mwabu also observed patients who declined to utilize free hospital services because of quality of treatment, confidence, and accessibility and opted to pay for modern as well as traditional services privately. Lasker (1981) observed that in urban areas traditional medicine was as expensive as modern medicine.

Chernichovsky and Meesook (1986) in their analysis of Indonesian household utilization data for urban and rural areas found strong positive correlation between high income and use of modern primary facilities, while the poorer segment of the population relied on the family and traditional medicine. In their study 76% of women, including those who had patronized modern antenatal services, were delivered by traditional practitioners. It seems that they have tended to narrow their explanation to cost. This study showed evidence of dual utilization since some women utilized antenatal services from the hospital but delivered at TBA residences. It could be erroneous to regard cost as the sole agent responsible for the pattern of utilization observed.

#### **2.5.6 Communication**

Communication in terms of information giving may not be readily conceived as a problem in the use of health services but could be quite important. Foster (1983), for example, related his findings on doctors' lack of communication skills while dealing with their patients which he attributed to culture gaps. A recent study by Zambrana *et al.* (1991) confirms this view. In their study of racial-ethnic pregnant women in Los Angeles although the women were highly educated, doctors had not communicated medical risks to them. Time available to providers was one explanation given for this default but it may not be unrelated to cultural or ethnic differences.

However, communication difficulties appear to exist in modern medicine even with people who share the same culture. This difficulty may exist due to other psychological factors which may be `social cues` felt and perceived by the patient. For example, if a doctor is perceived as being in a hurry to get rid of the patient, then the doctor's action could be interpreted as bad communication or lack of care, which may deter further attendance.

#### **2.5.7 Family or peer influence**

Suchman (1964) places more importance on social group influence than psychological and `service` factors discussed above. Suchman's argument was that the different levels of knowledge, beliefs and attitudes of diseases and illness is instrumental in decision making when seeking medical help. This model may seem to fit observations of incongruent patterns of behaviour in rural and urban areas of developing countries where there are very different levels of exposure either to education, the media and other factors. The evidence of some lay referral system being emphasised in the form of approval by elders in the family or community, before patronage is sought, could be linked to older relations exercising control and insisting on continued patronage patterns which are seen as capable of providing adequate service. The family, kin or friends may offer counsel on the meaning of symptoms, suggest tentative diagnosis, relay information concerning appropriate behaviour and practice for the promotion of good health and determine the need for professional help.

St. Clair *et al.* (1989) found that women with stronger or closer relative networks tended to under-utilize maternity services than those who had less contact with their families; indicating the network influence on health and service utilization. Characteristic to this attitude is the interrelationship between network and utilization which focuses on culture revealing the internalized values,

normative standards of behaviour and beliefs held in common by the individual's reference group. Their study indicated that family networks were more influential than friendships in terms of utilization. In the same vein, Zambrana *et al.* (1991) also emphasised a strong positive association between residence with husband and early registration and high frequency of prenatal check-ups. This relationship was stronger than that of education and planned pregnancy in their study. Similarly Kisekka *et al.* (1992) in their study in Zaria, Nigeria found the husband as the most important source of positive decision-making in health seeking behaviour on women followed by medical personal, the TBA, mother-inlaw and mother. Whereas for first pregnancies, mothers, mother-inlaw's and grandmothers were principal advisors. It may thus be viable to target families and communities for maternal education rather than just pregnant women.

#### **2.5.8 Cultural belief system**

In developing countries, there are several beliefs as to the kinds of treatment suitable for different types of ailment. Membership of certain ethnic, cultural or religious groups may be associated with the type of health care utilized. Some sources are considered more appropriate than others and would influence utilization behaviour. Ojanuga and Lefcowitz (1982) in their study of health care consumers in Nigeria found that, modern medicine was to be completely ignorant of some conditions such as 'Abiku'. This is a condition, that some women are believed to experience; they are thought to give birth to children who are predestined to be continuously reborn and die and only specific rituals involving the mutilation of the corpses performed by traditional healers can stop the birth recycling process. Similar cultural belief patterns were discovered in Good's study in Kenya in 1987. Stock (1983) also asserts that in some parts of Nigeria, preference for patronage of healers and medical practitioners was dependent on common language

or religion. Thus the beliefs of individuals or groups about the behaviour they should exhibit for any given health need may be crucial in determining their utilization patterns. Utilization patterns, including dual utilization, could thus be interpreted as a natural outcome of the existence of varying cultural beliefs amidst a pluralistic health system where no one system is able to meet all the needs.

#### **2.5.9 Quality of service or care**

Determining quality in service provision is difficult, but very important to utilizers as well as providers. It may have physical, attitudinal as well as socio-economic components. Quality of care comprises the scope, acceptability and performance of services and is assessed either from a consumer or the provider's perspectives. It is not unusual to find discrepancies between the two. The situation is further compounded in Third World countries where structural and functional ideals about services are documented but practically unworkable either due to lack of staff or medical supplies. Kumar *et al.* (1989) for example, report that the average waiting times at clinics reported by women attending and by health personnel are often quite discrepant. Bamisaiye *et al.* (1986) also found differential reports on the amount of health information provided and received about childbearing.

A different perception and interpretation is found in Donabedian's (1978) study where a medical service is regarded as of high quality if it has an 'objective' test such as an X-ray, blood analysis or similar components. Physical and aesthetic components including administrative facilities such as comfortable seats, space, comfort, cleanliness, and opening times are co-determinants of quality. Phillips (1981) on the other hand, expands quality to include the level of professional care, availability of drugs and the 'affective behaviour' of staff and ancillary workers to service users including bedside manner or order



of speech.

Akin *et al.* (1985) regard quality to be one of the most neglected demand issues in health care utilization. Heller (1982) associates increased income with demand for better quality. Heller interprets quality to be closely related to cost, availability and accessibility while patients' choice depends on the outcome of comparative standards, thereby indirectly or directly adding to the cost of care. On the other hand, if quality is considered distant and expensive, then consumers may either make do with local cheap provision or not utilize the services at all. Wong *et al.* (1987) discovered in their study in the urban areas of the Philippines that pregnant women preferred to use TBA services if clinics were frequently run by midwives instead of doctors and nurses. Whereas in rural areas the presence of a midwife signified high quality and increased number of visits.

## **2.6 Urban utilization patterns**

Excessive positive bias in the provision of health services and personnel in urban centres and, or cities over rural areas in Third World countries can not be over-emphasised (Leng 1982; Phillips 1986; Akhtar and Izhar 1986; Good 1987). In Kenya only 10% of the country's doctors serve in rural areas, and in Nigeria (including P.H.) very few doctors serve in rural areas while almost all the specialists practice in urban areas (Omu, 1981). Ghana allocates 67% of its doctors to urban areas and 33% to rural areas.

A possible explanation for this practice in P.H. is the legacy left behind by the colonial masters who lived mostly in urban centres and made provisions for their comfort. Current leaders have assimilated and retained the inherent structures for financial, administrative and political convenience. Another reason is that rural areas are usually

without good drinking water, reputable schools, poor housing, no electricity and other facilities. It, is, thus very difficult to persuade doctors to practice in rural areas to the detriment of a good standard of life for them and their families. Doctors are part of the elite and the dominant class who decide who gets what and where, and since the ruling classes are concentrated in cities it is only natural that they provide the best for themselves. Consequently junior doctors are prone to practice in rural areas and many of them bear this inconvenience through the ownership of two homes; their families living in urban areas while they shuttle between the city and their duty post. These working conditions sometimes result in the exodus of doctors abroad for better working conditions.

Higher rates of utilization are thus expected in urban areas because of the apparent good physical availability, transport facilities and shorter distances required to reach health care facilities at least in comparison with rural areas. However, other confounding factors such as poor housing, child care facilities, low income among other factors have been observed to hinder utilization. Finally, within a pluralistic health system, different utilization patterns for varying diseases (at different stages) could be viewed as a natural outcome of the consequence of the existence of varying beliefs and the inability of a single system to meet all needs.

An urban study conducted by Islam *et al.* (1993) in Bangladesh revealed that with close proximity, 71% of the women in their sample acknowledged the usefulness of modern antenatal services but only 45% of them actually attended, out of which only 6% actually delivered there. 94% of them had always delivered at their own homes with 74% being delivered by TBAs and the rest by relatives.

The reasons stated for non-use of the hospital were:

unfriendly attitudes of the health personnel and their demand for money before delivering service; clinics are run during unfavourable times; and they are too shy to attend the clinics. It is evident that all the reasons given by the women are controlled by providers rather than users. Consequently, it may necessary to examine service provision mechanism and tailor it to meet the needs of women if they are to benefit from the service. Below are views on TBA service utilization:

### **2.7 Factors in TBA services utilization**

Having defined the TBA in Section 2.3.7 the discussion here concentrates on earlier studies and services provided by TBAs. Kamal (1979) for instance divides TBAs in the Middle East and Asia into two categories; the "untrained midwife" who practices midwifery for a living and the "birth attendant" who is usually an elderly relative or neighbour and does not earn her living from midwifery. Kamal further states that the urban TBA fits into the first category; while the rural TBAs are a mixture of both categories. Kamal also observes the direct employment of TBAs by pregnant women both in rural and urban areas and acknowledges the presence of training for practising TBAs ranging from 1 week to 1 year. The major barrier identified in the training process is illiteracy but no reasons for patronage and in what patterns they occurred are indicated.

Several authors have studied details of TBA practice, and highlighted them as dangerous and unsafe (Larson et.al. 1980-1981, WHO.1981, Feyi-Waboso 1981) implying the TBA's inability to meet the safety standards comprised in the WHO (1966) definition of maternity care. Harrison (1979), for example, examined the delivery of maternal health care in Zaria, Northern Nigeria in detail and identified causes of maternal and prenatal deaths in relation to factors which influence maternal and prenatal mortality. They include traditional practices, maternal age and parity, influence of

antenatal care, low fetal birth weight, inflation and delay in the use of available maternity services. Harrison (1979) also maintains that obstetric and medical complications provide an incomplete view of the causes of maternal and perinatal death but identified four cultural practices that have injurious effects. They were 'Gishiri cut' (traditional operation on the vagina), puerperal 'hot baths', late hospital referrals decisions solely dependent on husbands which awaits them even in their absence and lastly marriage resulting in pregnancy before puberty.

Akenzua *et al.* (1984) found during their study in Edo State, Nigeria that harmful practices such as the use of unsterilized razor blades was common; 64% of TBAs used unsterilized razor blades, while 36% of TBAs used the edge of raffia fongs. 48% of TBAs thought it unnecessary to tie the umbilical cord before cutting it. The TBAs encouraged breast feeding but recommended that the colostrum be discarded. TBA care patterns included abdominal massage to secure favourable presentation believed to result in easy delivery and administering herbs to ease discomfort and cure infertility. In Port-Harcourt, as well as in the Philippines, the TBA returns to the home of the patient for several days after delivery to render postpartum care (WHO-Environmental Child Health, 1974) which includes bathing, laundry and house cleaning; a service unique to the TBA and valued by women. Lin *et al.* (1979) gave a summary of conditions for which TBAs are most frequently consulted and their management. They include: abdominal pain, bad dreams, no fetal movements, excessive vaginal discharge, headache and dizziness, fever, threatened abortion and retained placenta. For all eight conditions the TBA either gives herbs orally, to be bathed with or consulted the oracle for guidance. Neumann *et al.* (1974) also related that proximity, and the consideration of cultural sensitivity in TBA service results in patient trust. Several reasons were given for TBA service utilization. Kakar (1972) asserts that women do not

utilize the hospital service because of the modern methods of placenta disposal. Larson (1978) studied four TBAs in South Africa, and observed that non-utilization of health services was due to lack of medical staff and good infrastructure in rural areas. Another Nigerian study by Chiwuzie *et al.* (1987) predicts a continuous utilization of traditional medical services in Nigeria because patronage is based on reasons such as culture, cost and availability. They maintain that despite the controversy of the safety of traditional medicine, over 70% of Nigerians still use traditional services. Since the TBA is one of the principle elements of the traditional health structure, the implication is a large number of vulnerable members of society such as childbearing women, infants and children who are beyond the reach of the centrally organised health care system would continue to depend on locally organised or traditional health care systems.

"While urban centres are relatively well provided for, large sectors of the rural population (approximately 80%) have been neglected and, therefore, not reached with meaningful maternal and child health care. It is in the rural areas where large numbers of women deliver without help or rely on "experienced" women for assistance in the conduct of child birth."(UNICEF/WHO 1975).

These observations have confirmed and emphasised TBA patronage in rural areas due to difficulties in infrastructure but does not acknowledge urban utilization. One significant factor that consistently bothers providers is dangerous TBA practices. However, the TBA as a permanent and accepted member of her society became an important issue regardless of any laws or policies. It is difficult to effect a ban on TBAs because they do not advertise and cannot be easily identified, more so, the people believed in her; this led to a change in policy by various governments. All WHO members thus allowed TBAs to practice in their various localities and arranged training for them rather than

their practices.

"There has also been a shift in thinking on the question of whether TBAs should be regarded as a stop-gap, providing health care until sufficient numbers of nurses and midwives become available to replace them; or as important and permanent community health workers - a view to which many governments are now.....inclining" ( Owen,1983).

Some studies have also shown a less pessimistic picture of TBA practice. Brink (1982), highlighted both good and dangerous TBA practices and recommends selective training for TBAs, that is, retaining helpful practices that promote the wellbeing of the pregnant women, for example, the use of the squatting position during delivery, while discouraging harmful practices. Brink asserts that some of the training given to TBAs on modern medical practice is to the advantage of the obstetrician rather than the pregnant woman, for example, training TBAs to disuse the squatting position in delivery and encouraging the lithomy or dorsal position is not advantageous.

"In this case we train TBAs in harmful, as well as, helpful techniques, changing what they do that is beneficial and making it harmful and altering what they do that is harmful and making it beneficial" (Brink, 1982)

Brink identified a number of reasons which influence the choice of birthplace: distance, mode of transportation and wealth. Some women who would not deliver at the hospital after attending antenatal clinics gave the following reasons: the hospital would not let them squat for delivery, and the midwife or nurse at the hospital would not be in constant attendance during the delivery process as the TBA does. The women said they attend the clinics to receive the medicines and vitamins necessary to make their baby healthy. Although, the Brink study identified two reasons for non-delivery at the hospital, it did not identify the group of dual utilizers who go for massages or antenatal care at the

TBA's and deliver at the hospital. It also did not state the stages at which the pregnant women changed from the hospital to the TBA. The study was conducted in a rural Annang village in Nigeria rather than in an urban setting where hospitals are available.

WHO (1975) in its inter-regional meeting on training and utilization of TBAs stressed the significance of using TBAs in improving health care. It recommended that the TBA's contribution to maternal/child health and family planning should be enhanced. This would be achieved if their training programmes:

- 1) encourage and enable TBAs to become competent and willing to apply safer maternal/child health care, including help with family planning,
- 2) reinforce existing traditional beliefs, values, skills and practices that have positive effects on health care, and
- 3) develop among health professionals a better understanding and appreciation of the contribution of TBAs to health care.

It also recommended co-ordination among ministries and agencies involved at national, intermediate and local levels. Here the emphasis is on training and proper co-ordination of TBAs and the usefulness of their contribution to health care rather than why women patronized them.

Verderse de la et al. (1975) focuses on the TBA's role in maternal and child health as well as family planning and gives a guide to TBA training and utilization. The authors acknowledge the TBA's role in rural areas and depressed sectors of urban centres of many developing countries and suggest the need to fully appreciate her contribution to modern health programmes. The study finally recommends the reinforcement of positive traditional beliefs and practices in favour of maternal and child health and a modification of

negative practices. This study records a useful observation of the presence of the TBA in depressed sectors of urban centres but did not include reasons for their survival and patronage in the urban areas.

Some medical professionals detest the idea of training the TBA because they are illiterate, and consider the complexity and magnitude of knowledge in obstetrics and gynaecology too much for them to comprehend (Feyi-Waboso 1983). Jafarey *et al.* (1968) earlier expressed reported problems in convincing state government's health personnel of the potential benefits of utilizing TBAs and other paramedics in Pakistan.

Despite the criticisms on training, sometimes on inefficacy, at other times on its non-success (Ahmad *et al.*, 1991), most governments still look at training as the only available means of improving TBA practice. A WHO (1972) expert panel recommended a continuous in-depth review of guidelines for planning, implementation and evaluation of training programmes and supervision of TBAs. This recommendation was made to ensure the safety and quality of services rendered by TBAs because of their lack of knowledge. It did not consider what women felt about TBAs and their practice.

The inadequate provision of medical personnel compared to the high level of health needs in the Third World has long been established. Based on this inadequacy and despite the danger associated with the TBA practice, (Good *et al.* 1979, WHO 1981), there is a school of thought which asserts that as long as there are insufficient conventional health personnel for total coverage, and as long as funds for health care remain mal-distributed and inadequate, and women continue to demand "special packages" of services, offered only by TBAs, so long will these TBAs continue to be in demand (Owen, 1983).

"Traditional birth attendants deliver approximately 60%- 80% of all the babies in developing countries



and since they are often the only accessible and acceptable source of assistance in childbirth for a majority of women in rural areas, they will continue to respond to the demand for their services whether their services are deemed illegal or not" (Owen,1983)".

It is estimated that in many developing countries TBAs conduct as much as 60%-80% of deliveries (Population Reports 1980). A recent study by Alabi (1990) gives an even higher figure of 90% patronage to TBAs in Nigeria.

The growth of the TBA service into urban centres and cities presupposes the need to re-examine reasons for patronage and utilization patterns especially in urban areas or cities. Today, TBAs are the pioneers for use in the process of integration of traditional and modern medicine; especially in pursuit of family planning use and acceptance (Pillsbury 1982). Owen (1983) asserts that TBAs are legally free to practice in their localities in Nigeria and claims that the follow-up care in women's homes provided solely by TBAs would maintain their continuous patronage especially in rural areas. Obviously the personal care provided by TBAs in times of stress and pressures would suit pregnant women. It is not indicative as to whether the comfort overrides the dangers associated with TBA practices. The discussion will now focus on dual utilization.

## **2.8 Factors in dual services utilization**

It has been observed repeatedly that Third World countries with medical pluralism tend to have patients who utilize either the traditional or modern medical services or both concurrently. This process has been discussed in Section 1. For example, many Malaysian Chinese with higher socio-economic characteristics view traditional Chinese medicine as complementary to modern medicine, they move freely from one system to the other (Lee 1980; Phillips 1984; and Ho 1988). This confirms the existence of `dual utilization` observed in this thesis. The complementary nature of the two systems is identified by `users` and not `providers`. One

plausible reason for such perceptions may be the inability of one system to meet all their needs. Solomon and Rogo (1988) found that despite impressive antenatal attendance, very few women in their study area in Kenya deliver in hospitals. They did not find out why this occurred.

One possible explanation for dual utilization in obstetric care could be the value placed on vaginal births especially in developing countries. Women initially desire normal delivery and so try with TBAs for births per vagina and if they fail are sent to the hospital as a 'last resort referral' by TBAs or relatives who realise they can no longer deliver a woman at a late stage in labour. Often, these last resort referrals end up either as cesarian sections or as maternal deaths, furthering women's fears about hospital use. Thus women are known to book in several places; at the TBAs, in a private clinic and at the hospital. They may be looking for security and making provisions for emergencies. For instance, a woman threatened by cesarian section could decide to have her antenatal care in hospital because it is beneficial whereas she goes to the TBA to have a normal birth per vagina. The TBA alone gives the assurance of vaginal birth after cesarian section. However, interestingly, a recent study Clemenson (1993) has promoted the safety of vaginal births after cesarian section. Clemenson stressed that, the possibility of a cesarian section occurring in a trial of vaginal birth after cesarian, is not higher than it is in a primiparous woman giving birth. Clemenson stated the reasons for repeat cesarian sections without trial labour per vagina to be: physician bias, discomfort with vaginal birth after cesarian, convenience of repeat cesarean delivery and patient preference. Clemenson resounds the need to inspect and select patients by type of scar, as well as ascertain when in labour the cesarean section occurred.

Ademuwagun (1969) conducted interviews in western Nigeria

and tabulated demographic characteristics of respondents. The observation was that medical services are utilized from a variety of sources; self-help, modern health personnel/institutions, and traditional healers/midwives. It was found that the most frequently used was orthodox medicine and it had its highest patronage from child-delivery complications followed by spontaneous abortions. However, problems of infertility are considered more for the traditional midwives and healers. Although patronage patterns, demographic characteristics, and dual utilization, were observed, reasons for the patronage patterns were not studied.

Durkin-Longley (1984) also suggests dual utilization in urban areas to be due to the presence of medical pluralism; the presumption being that patients become accustomed to shopping around among the wide range of accessible health-care options that are available to them. This may well be so and was the premise of the introduction of the history of medical services in Port-Harcourt in this chapter. However, irrespective of what the circumstances are; what choice a woman makes in her obstetric care would determine the outcome of her pregnancy, to a certain extent, as no one system is perfect. The next section is a discussion of the possible outcomes in obstetric service utilization.

## **2.9 Outcome of obstetric service utilization**

It is clear that inadequate prenatal care contributes to unfavourable birth outcomes. The high rate of infant and maternal deaths in developing countries is of great concern to many. Conable (1987) asserts that as many as 1,400 women die daily in the process of carrying or delivering children, with approximately half a million maternal deaths in South Asia and sub-Saharan Africa. WHO, (1987b) estimated that approximately 500,000 women die each year from pregnancy related causes, with 98% of the deaths occurring in Developing countries. While the maternal mortality rates for

advanced countries like the USA and others are 10-15 deaths per 100,000 per live births, in many countries of the Developing World it is in the range of 100-200 per 100,000 live births.

It is estimated that about 60-80% of deliveries are conducted by TBAs in many developing countries (Population Reports, 1980). In Nigeria, it is estimated that about 90% of deliveries are conducted by TBAs (Alabi, 1990). Thus, the role of fertility behaviour as a predictor of health outcome in women is an important issue that need to be considered. The type of obstetric service utilized in most developing countries may have implications for the outcome of a pregnancy. Chukwudebelu *et al.* (1988) maintain that antenatal care remains one of the most crucial and pivotal single factors influencing the maternal mortality rate. In their study of the Enugu Teaching Hospital in Nigeria, they observed that the MMR for booked cases was 0.86/1000 as compared to un-booked cases of 41.3/1000 that is a 48 fold increase. Harrison (1985) found in Zaria, another Nigerian teaching hospital, similar results of 1.3/1000 for booked cases and 28.6 for un-booked cases. Briggs (1988) in his three year study during 1983-1986 also found the MMR in un-booked cases higher in the University of Port-Harcourt Teaching Hospital; the rate in booked cases was 9.7/1000 while un-booked cases was 17.8/1000. In all these studies it was discovered that the un-booked cases always arrived after they had been tampered with at home in unhygienic circumstances by relatives, TBAs or prayer houses resulting in ruptured uteruses. In the Enugu study, one of the deaths was a hospital staff member with a history of two previous caesarian sections who was promised a normal delivery by TBAs. The common factor was that they always arrived at the hospital when it was too late to help them. It is vital that women make accurate and safe decisions about the type of service they utilize. Although TBA services have been criticised as widely inadequate, dangerous or hazardous

(McGlashan 1969; Harrison 1976; Good et al. 1979; Queguiner 1981; Feyi-Waboso 1989), women continue to use their services for various reasons. It is thus important to obtain women's views as to what they feel are very valuable and attractive in TBA services which are lacking in the hospital or modern medical services.

Thus a sample of 700 women in Port-Harcourt, Nigeria were interviewed in an in-depth study with very specific questions. Questions asked included previous connections with a TBA before pregnancy. The aim being to establish a previous history of confidence, culture of use or a progression in the use TBA services. All birth histories of the women were taken but with more detailed information on the last five years, that is, from 1987 onwards (similar to the DHS data). This provided the sequence of use of services within a pregnancy and between pregnancies. This afforded women the opportunity to give reasons for their patronage patterns. Specifically, the pregnant woman's previous birth and abortion history, previous obstetric service patronage, distance and cost of patronage are all factors that have being studied to determine their association with, or effects on, patterns of patronage. More details on questions and methods are discussed in Chapter 4 on methodology. Adekunle et al. (1990) carried out a similar study as indicated below, showing obstetric service patronage patterns for Ondo State of Nigeria.

#### **2.10 The Ondo State Demographic Health Survey data**

The Ondo State DHS (ODHS) data was collected between September 1986 and January 1987 by the Ondo State Ministry of Health and the United Agency for International Development, while technical assistance was provided by the Institute for Resource Development (IRD), Macro Systems, Inc., USA.

The objectives of the survey were: to produce data on

fertility levels and intentions, family planning utilization, infant and child mortality, and maternal and child health; to measure changes in fertility and family planning practices; to be used for reference and to develop the availability of participating staff for future population-health based surveys.

The survey utilized two sets of questionnaires, one at a household level and the other for all women aged between 15 and 49 years within the sampled household. The Ondo sample is a two-staged stratified self-weighting probability sample, representative of the whole state with a total of 4213 women aged between 15-49 interviewed.

Adekunle *et al.* (1990) analyzed the ODHS data to identify in detail, patterns of maternity care in developing countries. Their major objective being to identify patterns in the utilization of maternity care by maternal characteristics. They used three principle variables which indicated utilization of maternity services: attendance for a pregnancy check-up by person seen, receipt of tetanus toxoid injection during pregnancy and assistance at delivery by type of person assisting. The analysis only included women who had at least one birth in the five year period, resulting to 2155 women. The questions asked were relevant to each birth irrespective of whether the child was alive or not.

The second group of 406 women included in the Adekunle *et al.* (1990) study were those currently pregnant including 94 who had never given birth making in total 2249 women. They identified: maternity care patterns among women according to their most recent births in the last five years, care patterns among currently pregnant women and also examined the uptake of maternity care among births to the same women.

### 2.10.1 Maternity care patterns in the five year period in the ODHS data

Adekunle *et al.* (1990) described the patterns of maternity care in women's most recent births in the five year period by their socio-economic and demographic characteristics. The variables considered were 'receipt of tetanus injection', 'type of person seen for pregnancy check-up' and 'type of assistant at delivery'. The results indicated that 71% received tetanus injection, 81% saw a doctor, nurse or midwife for antenatal care, leaving a discrepancy of 10% which is speculated may be because of assistance sought for curative reasons. While 54% of deliveries were conducted by nurses or midwives, 34% of deliveries were conducted by relatives who may be classified as TBAs as they are untrained. Their study indicated a higher proportion of usage for professional assistance in prenatal care than delivery by 27%.

When the background characteristics of age, education and parity were considered, there was a higher uptake of tetanus toxoid, pregnancy check-up and professional assistance at delivery in women under 35 years (72%, 80%, 58% respectively) than those over 35 years (68%, 78% and 56%). A similar association was found with education at primary level, although nearly 20% of women who received tetanus toxoid and professional assistance in antenatal services still delivered with non-professionals. An interesting relationship occurred with the effect of parity. Women with 2-4 births tended to have higher uptake than do either women with 1 birth or more than 4 births. They interpreted these occurrences as lack of awareness for the primiparous and a show of greater confidence and experience by those with more than 4 births.

In the absence of information on availability of maternity services (antenatal and intrapartum) in the ODHS data, Adekunle *et al.* (1990) created and utilized an alternative

surrogate measure. This was done by ranking of the 33 areas of Ondo State, comprising the rural, urban or riverine sections of the 17 local government areas. The ranking was based on a composite index of six socio-economic variables; electricity, cement floors, piped water (residence or public), toilet facilities (pit or flush), proportion of literate women, and ability to read plus the number of births in the five years period. These were tabulated and breaking points identified to distinguish between socio-economic regions, resulting in six classifications of socio-economic regions, with 1 being the most 'developed' and 6 the least 'developed'. Four factors were used for the multivariate analysis using logistic regression, they are maternal age, education, parity and socio-economic region. The original coding categories were regrouped as shown; (A = Age 1: < 35, 2: 35-49; E = women's education 1: no schooling, 2: primary schooling; P = Parity 1: 1 child, 2: more than 1 child). The models were fitted separately for the socio-economic regions, regrouped into socio-economic regions 1-5 and socio-economic region 6. Age, education and parity were not independent so additive models and models allowing for two-factor effects were fitted hierarchically.

After re-grouping the coding categories the results of the logistic regression found the corresponding goodness of fit statistics (deviances) to be similar for all three maternity care variables; age, parity and education, thus Adekunle *et al.* (1990) carried out the comparative exercise for one variable. In socio-economic regions 1-5; they controlled for maternal age, and found the level of education appeared to be significantly related to the uptake of tetanus toxoid ( $p < .01$ ). The appropriate models are (A), which excludes the effect of level of education, and (AE) which includes the effect. The difference between the deviances in these models is 15.23 with 2 degrees of freedom; ( $p < .01$ ). Thus education appears to exert an effect on the uptake of this preventive measure independently of the influence of age. Similarly,



controlling for the effect of age, parity does not appear to be predictive of receiving tetanus toxoid injection ( $p > .05$ ). When parity is controlled, age is not statistically associated with tetanus toxoid injection ( $p > .05$ ). Similarly, when parity is controlled, level of education does not appear to be related to uptake ( $p < .01$ ). They, thus, hypothesize that maternal education is not significantly related to maternity care utilization after controlling for age and parity in regions 1-5. When contrasting the appropriate models, (AP) and (AP, EP) the result was statistically significant ( $p < .01$ ) which suggests an independent effect of maternal education. A similar analysis was not undertaken for socio-economic region 6 because the deviances show little variation and no particular model is more powerful as regards predicting the uptake of maternity care.

#### 2.10.2 Care patterns in currently pregnant women in the ODHS data

All the currently pregnant women reported being married and nearly half of them (193) had received a pregnancy check at the time of the survey. Adekunle *et al.* (1990) found 77% of the women receiving a check were between 5 and 8 months pregnant. Examining the influence of background characteristics revealed that controlling for month of pregnancy, a clear positive relationship between various levels of education and pregnancy check-up only occurred in the third trimester, in other words, the differentials by education are very minimal in the first two trimesters of pregnancy.

When age was considered, there was a low attendance in all age groups (less than 50%) except for those aged 20-24 age and those aged 40-49 years. This pattern could be associated with difficult births in older women and anxiety and lack of experience in young women commencing the birth process. However, of 43 women aged between 15-19 there was a low

attendance of 41%. This may either be because they are embarrassed at exposing themselves or are completely ignorant. But when month of pregnancy is controlled, the rate of pregnancy check-up increases more or less steadily by month within each group, except for age group 30-39 with no consistent pattern. Parity indicated that zero parity and multiparous women had lower attendance, contradicting the expected higher attendance as indicated above. It was consistently shown that women who had lost babies had higher attendance than those who had not. Similarly, the poorer regions had the lowest attendance irrespective of age, education or parity supposedly reflecting on availability.

For co-variables of personnel consulted for check-up, education appeared to be inversely related to the proportion consulting untrained personnel. That is, the higher the education the less likely an untrained person will be consulted. Similarly receiving a tetanus toxoid injection appears to be positively related to level of education, with the proportion varying by socio-economic region with the poorer regions having less utilization. The distribution of 'persons seen' by age suggests a fairly consistent positive trend towards untrained personnel.

### **2.10.3 Maternity care patterns among the births to each woman in a five year period in the Ondo study**

Adekunle *et al.* (1990) established variation in the use of maternity care among births to the same woman in the five year period. The same three variables were examined as in current pregnancy and in the five year period above. All births were examined irrespective of their survival status. Pregnancy check, represented professional check with either a doctor, nurse or midwife while TBA, other or relatives were excluded as not having had a check. For tetanus toxoid it was either the woman received it or not, while for delivery it was a similar classification as pregnancy check above.

The results indicated that the probability of having a pregnancy check for all births was largely unaffected by the number of births. The probability of a woman not having received a pregnancy check is higher for women with only one birth in the five year period (0.228) compared to women with three births (0.144). A further analysis of women with two births suggests the probability of a woman having a pregnancy check for her most recent birth to be 0.0807 but it would be significantly higher if she had also received a check-up for her previous birth (0.936). In contrast there is a 0.817 probability of a woman not having benefitted from a pregnancy check for her most recent birth, if she did not attend for the first in the five year period. Similarly, a woman's most recent birth has a higher probability of not receiving tetanus toxoid injection, if it is the only birth in the five year period (0.307) than if it is one of three births. It is also clear that it is less likely for a woman to receive tetanus toxoid injection than she would attend pregnancy checks for both the first and most recent births.

In seeking professional assistance at delivery, for a woman with two births, the probability of delivering both with professional assistance is 0.510, while the probability of delivering neither with such assistance is 0.339. Again, it is shown that for the second birth a woman is most unlikely (0.12) to deliver with professional assistance if for the first birth in the period she did not utilize the service. The conclusive observation is that only a small proportion of women who received tetanus toxoid injection and professional assistance at delivery for both births did not also receive a pregnancy check for both, while over a third of the women who had tetanus toxoid injection for both births did not receive professional assistance at delivery for both. There appeared to be a tendency for some women not to have tetanus injection or professional assistance at delivery but still receive a pregnancy check for both births.

Further analysis was carried out with just two births in the five year period to limit the huge range of relationships possible in the data. When age was considered, it was found that the older age group 35-44 exhibited the higher proportion of women who did not receive a pregnancy check while the younger group 20-24 had the highest patronage. Similarly, for women with two births, those whose husbands had some primary education tended to have received a pregnancy check than those who had not, but for those with just one birth it did not show any changes. There were no significant patterns associated with marital status or parity.

On professional assistance at delivery, similar results were obtained with those aged 25-29 having the highest patronage for both births while those aged 35 and over had the highest proportion of those receiving professional assistance at delivery for neither of their births. Their findings suggests that schooling plays a more decisive role in the utilization of intrapartum as opposed to antenatal care, while there is a suggestion that there is a declining tendency to seek professional assistance at delivery with increasing parity.

#### **2.10.4 Limits of the Adekunle *et al.* (1990) study**

The Adekunle *et al.*(1990) study did not cover issues of service availability, although numerous studies have emphasised the importance of availability on utilization especially in developing countries. They used a surrogate measure to rank areas in rural, urban or riverine sections of local government areas (regions 1-6); but it does not necessarily provide an accurate measure. Indeed, structural development or infrastructure in developing countries, especially Nigeria is rarely defined constructively but determined by political and tribal considerations. The presence of pipe borne water and other amenities may not necessarily depict the elevation of a region as there are

current efforts by government to make provisions of water, toilets and good roads for rural areas through the then Directorate of Foods, Roads and Rural Infrastructure (DFRRI) and presently through the National Petroleum Fund (NPF). The presence of these facilities do not necessarily guarantee their use, efficacy or maintenance. Concerning currently pregnant women; there were no questions as to when they had their first check or on the frequency of checks. Similarly, although it was indicated that all the women (17) who had lost babies had previously had a check with a professional, have current higher attendance, there is no indication as to which professional, whether they saw the professional alone, and if they are still using the same service or have changed because of their previous experience.

There is ambiguity in the definition of pregnancy check as some women may not regard massage solely provided by TBAs as an antenatal check-up. It may well be regarded as a curative service as women go for massage when they are in pain, to confirm the lie of the baby or need to turn a breach baby. The exclusion of the use of TBAs or relatives in the definition of pregnancy check depicts an erroneous picture of utilization patterns exhibited. Their study identified the patterns of use of services, but did not provide reasons for the recorded observations.

#### **2.10.5 Further work and extensions**

This research has repeated the same analysis (apart from the rankings and births to the same woman) as Adekunle *et al.* (1990) on the national 1990 NDHS data and ascertained the similarities and differences with the Ondo State findings. Work on the national data shows national pattern of patronage in favour of TBAs for delivery and provides the justification to ascertain from pregnant women why this is the case. The second aspect of this research extends their work by analyzing local Port-Harcourt, urban data, consisting of interviews with 700 pregnant women. This data

provides data and controls for lack of availability, as urban areas always have better provision which has previously been discussed in this chapter. A quality study of 17 pregnant women was carried out by following their patronage patterns in different stages of pregnancy till delivery. This process enabled the researcher to solicit directly from pregnant women, their perspective or reasons for patterns of obstetric services utilization. Finally, the carers or providers including Doctors, TBAs and Nurse/midwives were also interviewed for their own views on obstetric patronage patterns.

## Chapter 3

### TBA's practice and the hospital

#### 3.0 Introduction

In Chapter 2, literature on factors related to obstetric service utilization was reviewed. The emergence of modern medical services in Port-Harcourt, as well as a description and utilization of hospital and traditional birth attendant (TBA) services, independently and concurrently, were given particular attention. Dual utilization was also defined and described. In this chapter TBAs and the hospital are examined.

TBAs are present globally in Africa, Latin America and the Caribbean, the Middle East, Asia, Western Pacific, Fiji, and China with flourishing practices. Some people believe their presence indicates a poverty syndrome in the countries where they operate. There are wide variations between the TBAs in different countries and they are known by different names. Previously, TBA services in Nigeria were mainly a family or hereditary affair. However, with the emergence of western education through colonization TBA services have become commercialized and urbanized as observed in Port-Harcourt. Significant to this change is the fact that family members now choose formal education or are simply not interested in TBA practice. TBAs now train non relatives for payments. Their services have also evolved to the level of having rudimentary training from government as well as making referrals to hospitals for difficult cases.

Their services include the provision of cures for infertility, antenatal care for pregnant women in the form of the administration of herbal drugs, drinks, massage, vaginal examination and delivery, and the conduct of home visits for delivery as well as to bath and cook for mother and child and generally care for them.

### 3.1.0 TBAs in Port-Harcourt

There is no literature available on TBA practice in P.H. The information recorded in this Chapter is obtained through observation, interviews and discussions with Ministry of Health staff, TBAs and service users in Port-Harcourt. Thus reference would be made to literature on Nigeria and elsewhere when appropriate although focus will be on TBA practice in P.H. The second section examines the hospital as it relates to pregnant women. The focus is on facilities available, the quality and cost of care. Also discussed is service provision and the delivery to service users.

As a rule the majority of deliveries are conducted in the homes of patients where the TBA is called in at the onset of labour. The TBA is unhurried, patient in the services rendered and typically shares a common language with patients. In P.H. the TBA uses either the native dialect or pidgin English to communicate with patients. Leedam (1985) maintains that urban TBAs conduct more deliveries than their rural counterparts because of increased population. Leedam's finding agrees with TBA assertions that their patronage is high in Port-Harcourt.

The strength of the TBA, lies in the art of communal culture and social values shared with patients. TBAs demonstrate a good knowledge of the culture and traditions and stress their strict implementation, thereby commanding respect and a high social standing. Ironically, TBA weakness is also imbedded in the traditional practices which are sometimes dangerous to patients. For example, TBAs adhere rigidly to dietary rules and assume an important role in transmitting knowledge of the nature and effects of food. Most TBA beliefs and practices concerning reproduction are rooted in religious and mystical sanctions, reinforced by rituals believed to ward off the causes of illness. Their services are rendered on humanitarian principles and include prenatal care, consisting mainly of advice, or instructions;



abdominal massage and the administration of herbal remedies for sickness and discomfort.

### 3.1.1 TBA training in Port-Harcourt

In Port-Harcourt, southern Nigeria, TBAs are called Mama, meaning mother, but in the north they are called Anguwan, meaning midwives. The beginning of the 1970s witnessed encouragement from WHO to member countries to initiate programmes to train and utilize TBAs as extensions of formal or informal systems of their maternal and child health (MCH) services. Each country was encouraged to identify its own needs and resources to develop individual programmes. The suggested activities for TBAs included making referrals to hospitals; increased ability to identify abnormalities and make speedy referrals, ability to give adequate advice including family planning, ability to encourage and prepare women for prenatal care and delivery in hospitals. The relationship between late referrals from TBAs and high maternal mortality rates have already been discussed in Chapter 2.

WHO's approach resulted in increased recognition and training for TBAs, in that, whereas, by 1972, only 20 countries recognised TBAs, by 1982 the figure had risen to 45 countries. A similar experience occurred in training programmes, increasing from schemes in 24 countries to 52 in the same period. Many countries have complied to training and in P.H. TBA training is conducted by the state Ministry of health with a durations of between 1 week and 1 year. TBAs are taught basic hygiene and features to be expected in pregnancy and delivery and when to make referrals. It is not clear if training made a difference to the rate of patronage of TBAs. However, it was noted that TBAs who had received training placed their certificates on their walls and talked about their training with pride. Registers of practising TBAs exist for rural areas of Rivers State but not for P.H. Surprisingly, despite these training programmes, the health

problems remained practically unchanged.

### **3.2.0 The TBA's practice**

In P.H. two sets of health services exist: the traditional and the modern. We shall now examine traditional obstetric services for pregnant women. TBA prenatal and postnatal care consists mainly of carrying out measures, considered appropriate to the local culture, that make for the ease of pregnancy and childbirth and ensure the safety of mother and her child during pregnancy as well as aftercare services for nursing mothers in their homes. Below are details of various services provided by P.H. TBAs.

#### **3.2.1 TBA antenatal or prenatal care**

Several cultural taboos are believed and practised by pregnant women in P.H. for their benefit and that of the unborn child. The need to maintain secrecy about pregnancy still persists in many women in P.H. because this attitude is deeply rooted in the traditional belief that there is a possibility of negative interference from spiritual forces if pregnancy is acknowledged. This belief pattern is similar to those identified by Brindley, (1985). Prenatal care includes advice on what to do and not do including diets to procure safety, supported by traditional beliefs on the causes of ill health. There are, however, more don'ts than dos, for example, in Peru and Mexico pregnant women are not allowed to eat pork, most fish, certain fruits and vegetables because they are classified as "cold foods" and are believed to cause harm. In South Africa, eggs are believed to cause "hot blood" or increased sexual arousal; sex is deemed to be dangerous in late pregnancy and so is restrained (Larsen et.al., 1983b). In Port-Harcourt women are advised not to have their photographs taken in pregnancy, take cold drinks like coke, or eat monkey meat. Such actions are considered harmful to mother and baby. Sometimes the choice of food imposed is so rigid that it may affect adversely the health of the woman and the fetus. For

example, if meat or fish and similar items are excluded it may lead to a deficiency in protein and nutrient intake. Given the high incidence of cephalo-pelvic-disproportion amongst African women (Mphahlele, 1982; Stein and Mouton, 1979), drastic limitations of dietary intake reflect an innate, but probably limited, understanding of this birth difficulty.

In P.H. pregnant women regularly go for massages to ease pain in the stomach, waist and hips. It is believed that massage makes for easy labour and delivery and such occasions enable the TBA turn babies with breach presentations. These are services solely provided by TBAs, out of reach of women who patronize hospital services alone. Breach presentations lead to cesarean sections in hospital and cesarean sections lead to stigmatisation as already discussed in Chapter 2. The TBA also specializes in the treatment of fibroids: a condition which is very frequent among negroid women and causes infertility. The medical solution to this problem is only surgical but the TBA has a "fire or heat" treatment which melts away the fibroids in the stomach. Please refer to Figure 3.d. Women, and indeed most people, dread the surgical interventions by medical practitioners and would do almost anything to escape such an intervention. It is, therefore, hypothesized that such non surgical interventions are attractive to women, that women are likely to rationalize, and opt for an initial testing of the TBA process as it does not appear to cause any harm, and if it fails, they have the hospital option.

The TBA conducts home visits, is available 24 hours of the day and identifies with her patients. The TBA is readily accessible, available and consequently empowers patients to seek help anytime. Whereas, in hospital, pregnant women are seen by different doctors and nurses and are not afforded the privilege of home visits. There is, however, the provision of the casualty department for emergency cases but

not without anxiety or waiting time.

### 3.2.2 Care of the mother by the TBA - delivery service

Delivery conducted by the TBA in Port-Harcourt is usually at the client's home but occasionally at the TBA's residence attended by at least one elder, a trusted female member of the family and occasionally by favoured women in the community. Brindley (1985) and Tyrrell & Jurgens, (1983) document similar findings in their studies. TBAs allow close relatives to be present except husbands to support the labouring woman. They say it is not good for the man to be there. Brindley (1985) records the same exclusion of men in South Africa imbedded in the belief that such an experience weakens a man. It is the client that needs to choose the place of delivery.

Delivery positions range from squatting, kneeling, sitting to lying down. The position is important in keeping with the woman's sense of traditional modesty, because exposure of the lower part of the body is, in some cultures, amongst women in P.H. considered an immodest act. It has also been highlighted that modern obstetric positions are for the benefit of the obstetrician rather than the comfort of the pregnant woman (Brink, 1982). Women consider the birthing position an important component in the management of pregnancy and delivery. The relatively recent horizontal birthing position in use only for the past 200 years in Western cultures has been a subject of great controversy (Dunn, 1976; Wertz *et. al.* 1977). Several explanations surround the evolution of the birthing position from the upright to the current dorsal and lithotomy positions. They include: facilitation of forceps usage, promotion of men's power over women, and suitability for the administration of anaesthesia, the change being pioneered by leading french obstetricians. Mendelssohn (1982) records the role of the perverted King Louis XIV who promoted the reclining position in order to have a better viewing position for his pleasure.

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the Kalabaris it is with a culmination of the "iria" ceremony incorporating dancing and celebrations of gifts and lots of eating and rejoicing which involves the whole community.

### 3.2.3 Newborn Care

The placenta cord is cut with a razor blade, sharp stalk of a plant or with scissors. Hygienic precautionary measures are not always observed. Substances such as sago flour, scrapping from a coconut shell, ashes from the heart of the stove are applied to the cord. With training and exposure to modern medicine, hygienic measures such as boiling of the instruments is being done by P.H. TBAs. The placenta, believed to be the source of strength for the child all through life, is highly valued and so is either buried or burnt. The burial place of the cord and the reed used to sever it at birth is of special significance (Baartman, 1983).

Traditionally, the mother or mother-in law and sometimes the TBA, or a combination of all three would be expected to provide the post-partum support role. This role is actualized through the provision of an instrumentalized support by physically caring for the mother and baby, as well as emotional support and giving instruction and advice on child care to the new mother. The support givers would be held responsible for the child's wellbeing during the period (Brindley, 1985).

Below are photographs of TBAs and some scenes of their practices in Port-Harcourt.

Figure 3.1 Photographs of TBAs and Scenes of their practice.



Figure 3.1a-TBA aged 75yrs



Figure 3.1b-TBA massages patient.



Figure 3.1c-leaves and chalk(drugs) used by TBA.



Figure 3.1a-TBA aged 75yrs



Figure 3.1b-TBA massages patient.



Figure 3.1c-leaves and chalk(drugs) used by TBA.



TBA services are generally the same in P.H. except for differences in cultural variations on foods not allowed in pregnancy, husband's role during delivery, who should be present, how to dispose of the placenta, how long the woman would stay away from public view. Each culture practices what it considers to be correct (Jordan, 1983). TBA practices are predominantly believed to be beneficial by women, but seen to be dangerous by medical practitioners. There have, however, been several late referrals from TBAs to hospitals, which have resulted in maternal mortality as recorded in Chapter 2. All the TBAs interviewed in Port-Harcourt claimed not have had any deaths in their years of practice. This may have occurred because TBAs send off all difficult cases to the hospital and so avoid having any casualties themselves. Prominent among such referrals are prolonged and obstructed labour, haemorrhage and retained placenta.

#### **3.2.4 Cost of TBA services in P.H.**

The cost of TBA services vary from place to place and with TBAs. In Port-Harcourt TBAs charge differently for different services. For example, for one particular TBA each massage cost 10 naira, 150 naira was the delivery for boys and 140 naira for girls. For another TBA a total of 300 naira is paid for the whole of antenatal care and delivery for one pregnancy, and yet another TBA charges 5 naira for massage and 120 naira for delivery of both sexes. One of the TBAs just takes whatever is given to her after the service. Mu'azu-Alti (1985) observes uniform TBA payments in two northern Nigeria villages to be a new cloth, 2 naira, soap, powder, perfume, pomade, salt, spices, potash, grains and the patient's old clothes. Another observation by Mu'azu-Alti (1985) which is similar to Port-Harcourt, is in TBA flexibility, the acceptance of either delayed or instalment payments; a show of leniency and understanding by TBAs. The next session will now focus on hospital services in P.H.

### **3.3.0 Hospital services in P.H.**

In a broad sense, the hospital is a public utility whose purpose is to serve the entire community, the well and the sick. Service to the patient is not the only role of the hospital but one of a complex number of services comprising of education, research, preventive and rehabilitative medicine. Thus the hospital can be seen as resting on three basic functions; care of the patient, extension of knowledge regarding the management and prevention of diseases, and the education of health personnel.

As discussed in Chapter 2 that there are teaching hospitals, general hospitals, health centres, maternity homes and clinics in Port-Harcourt. For a pregnant woman, her first planned contact in the hospital is called the "booking Clinic"

The following descriptions are specific to personal observations and experience in UPTH and may not fit the structures of other teaching hospitals elsewhere in Nigeria. The observations were made daily by attending the hospital antenatal clinics.

#### **3.3.1 UPTH booking clinic**

The booking clinic is designed to gather information about pregnant women in their first visit to the hospital. The information consists of a medical and social history. Facts pertaining to age, marital status, address, level of education, previous pregnancies and so forth. The patient is then subjected to a medical examination by the doctor. This is to ascertain the progress of the pregnancy and eliminate any problems. Blood and urine tests are also carried out. If the patient is fine then blood tablets and other routine drugs are given, plus a future appointment to attend the antenatal clinic at scheduled intervals, that is, on weekly, fortnightly or monthly basis except in emergencies.

### **3.3.2 UPTH antenatal clinic**

Antenatal clinics are similar to the booking clinics and are conducted at regular intervals. The nurses weigh the patient and check her blood pressure while the doctor conducts an abdominal examination, as well as any other examinations and tests thought necessary. A health talk usually precedes the activities described.

### **3.4.0 UPTH labour ward**

At the onset of labour the patient reports to the labour ward and not the antenatal clinic. Patients are likely to be attended by student nurses and medical students who want to acquire experience in the delivery process as a partial requirement for their examination. If labour starts at night then the patient is likely to meet about two student nurses, one trained mid-wife or staff/nurse-midwife and a house officer. The patient is required to present her antenatal appointment card before being examined, and the medical and social history is taken all over again, usually by the house officer. The nurses would take the delivery if uncomplicated and the patient discharged a day or two after. However, if the labour is difficult and complicated then doctors would be called.

Only open labour wards are in use in UPTH and so make it is impossible for family members to be present.

Below is a pictorial presentation of a University of Port-Harcourt Teaching Hospital (UPTH) antenatal scene;

Figure 3.2 <sup>2</sup>Pictorial Presentation of an antenatal clinic scene in UPTH



Figure 3.2a

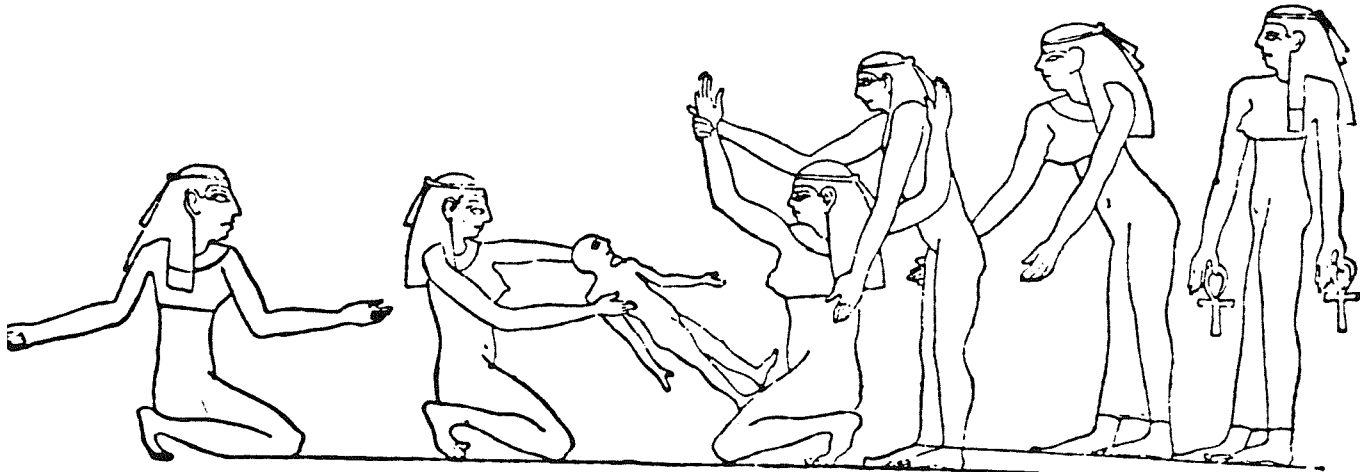


Figure 3.2b

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The first picture shows a nurse taking the height of the pregnant lady, while the second records her blood pressure being measured.

<sup>3</sup>Figure 3.3 Diagrammatic representation of various birthing positions



-The accouchement of Cleopatra. Bas-relief from the temple of Esneh, a town on the Nile in Upper Egypt.



Midwives attending woman in labor on birth chair, 16th century.



-Pioneer birth scene after Engelmann's illustration showing woman, husband, midwife, and two attendants.

Source: Public Health Then and Now; AJPH May 1987, Vol. 77, No. 5 p 636-641.

### **3.5.0 Bureaucracy**

The University of Port-Harcourt Teaching Hospital has every obstetric patient under the care of a consultant obstetrician from the date of her registration to delivery. Patient examinations and tests are under the supervision of junior doctors, nurses and other hospital personnel and complications referred to the consultant.

It is suggested, therefore, that the patient is bombarded with a lot of interactions and most of them prolonged. This experience can cause dissatisfaction and sometimes even suffering. Thus the patients may feel that they are not treated fairly or with respect. It is not likely that bureaucracy can be done away with completely. However many organisations are more flexible than bureaucracy allows. However, when consultants declare their readiness to be called upon anytime, some nurses still insist on the hierarchial process.

### **3.6.0 Health care facilities and quality of care.**

At the time of this research (1992) basic materials and equipment like blood tablets and vitamins, (needed for the of the baby) and urisfix (for urine testing) and maintenance of the health of the expectant mother were in short supply. Thus pregnant women had to purchase these drugs themselves from chemists shops or quack drug hawkers and sometimes end up buying expired drugs. Others do not bother to go through the trouble of looking for the drugs as they do not perceive themselves as ill. Most women value the drugs they receive from hospital because they perceive them to be genuine. Thus, the only source of satisfaction they have are the drugs they take home. In the absence of this, the pregnant woman feels there is no point going to waste her time at the hospital. This tangential affect could lead to an increase in morbidity and post-natal mortality rate in the hospital utilizers and non-utilizers.

This may be related to the number of unregistered women who arrive as emergency cases for hospital delivery, when nothing feasible can be done about their anaemia or other diseases that could have developed as a result of lack of antenatal care. Some women have died in such circumstances, coupled with their inability to purchase blood from hawkers as there is insufficient supply in the blood bank. It is hypothesized here, that lack of health care facilities does affect the quality of health care provision for pregnant women and equally, put them off the use of modern obstetric services which consequently lead to an unsafe birth process or even death of the mother and baby.

### **3.7.0 Health care costs**

Pregnant women who believe hospital services are expensive seek inexpensive substitutes which are either maternity homes, TBAs, unauthorized chemists shops and clinics. As of 1985 the sum of 100 naira paid at the booking clinic of the UPTH would only entitle a pregnant woman to attend the antenatal clinics at the hospital. Sometimes women only get prescriptions with which to purchase drugs outside the hospital. This results in women spending unequal monies on the same drugs (prices are reached through haggling), depending on one's bargaining power, who sells the drugs, and how much the seller bought the drugs for.

To deliver at the hospital without complication cost 100 naira only. Delivery by cesarian section costs 200 naira twice that of normal delivery. In 1983 a normal delivery and caesarian section both cost 20 naira. The increase led to a drastic fall in the booking and attendance of antenatal clinics. This led to an increase in maternal deaths and stillbirths because many women come in at the point of death, with their uterus ruptured either by a TBA or a quack midwife. The high incidence of such cases led the authorities to reduce the booking and the delivery fees to 50 naira respectively in 1992 while maintaining the

caesarian section fee at 200 naira. Thus the average health care cost of one pregnant woman which was between 500 and 1000 naira has fallen to between 200 and 500 naira. These amounts include ward fees as well. Staying in the open ward cost 13 naira per day and in the side wards it cost between 30 and 45 naira. The total expenditure estimated between 500 and 1000 naira is still expensive to the average Nigerian woman. The relatively expensive nature of the service is clearer when it is related to the minimum monthly income of 600 naira. However, it was observed during the survey that some TBA charges were cumulatively more than what the hospital charged. TBAs charge 10 naira per massage and some women go for at least one or two massages in the month. TBAs charge between 150-200 naira per delivery. Ityavyar's (1988) study focuses on class and inequality, but ends the discussion by suggesting that the elimination of cost would not hinder utilization of traditional services because of the attitude of hospital services providers and waiting time. The latter point seems to agree with both the pilot and current studies.

### **3.8.0 Location of health services in P.H.**

In this section we discuss the level of provision and the efficacy of health services. The gross inadequacy and inequalities of health services provision in Nigeria cannot be over emphasised (Iroha, 1984; Ityavyar, 1988). The inequalities of health services provision are evident nationally, depicted in urban and rural dichotomy. The ruling class sites hospitals and other resources in state capitals where most of them reside. Ityavayar (1988) attributes health services inequality to the capitalist system imbued through colonization; a process or structure which excludes the masses from participating in policy making and commercializes health. Access to health services, therefore, depends on the control of the means of production and the ability to buy. The emphasis being that proximity becomes meaningless or irrelevant to the urban poor who has



spatial access, but more so to their rural counterpart who are denied both a spatial and social access. Most of the health service inequality and inadequacy is attributed to the governance of the military rulers of Nigeria. The high frequencies of coup de' tats since 1966 in Nigeria coupled with changing policies with each succeeding government without continuity from previous governments, has been a major impediment to the growth and development of health and other services in the country. Alubo (1992) refers to an earlier work in 1985 which records how one of the military regimes tackled problems with military resolve in which many of it's "solutions" contradicted earlier declarations. The continuous disruption has not helped the quality of modern hospital services and so do not motivate the use of it's services.

There has however been some significant progress in the provision of health services in Nigeria since independence in 1960. Tables 3.1, and 3.2 indicate the level of provision in the country in 1980 and 1979. Current and accurate statistics are difficult and not readily available generally in the Third World, Nigeria inclusive, and so it was not possible to get prevailing data in this thesis.

Table 3.1 Distribution of hospitals and hospital beds in Nigeria-1980

States	Population	Hosp	Hosp-popu/ratio	No of Beds	Bed Population
Anambra	5.30	76	70.00	5.38	0.99
Bauchi	3.60	63	57.80	4.80	0.76
Bendel	3.60	63	57.80	4.80	0.76
Benue	3.60	15	239.40	1.10	3.20
Borno	4.50	14	317.50	1.40	3.20
Cross River	5.20	32	160.80	2.60	1.90
Gongola	3.90	12	321.20	1.60	2.40
Imo	5.50	64	84.90	4.40	1.30
Kaduna	6.10	27	224.60	3.20	1.90
Kano	8.60	16	534.60	1.40	5.60
Kwara	2.60	22	115.30	1.80	1.40
Lagos	2.50	29	82.60	10.20	0.23
Niger	1.80	5	353.40	0.74	2.40
Ogun	2.60	22	104.30	2.30	1.01
Ondo	4.10	24	168.30	2.50	1.60
Oyo	7.80	58	132.90	5.60	1.40
Plateau	3.00	15	200.80	1.40	2.10
Rivers	2.60	25	101.80	1.70	1.50
Sokoto	6.80	7	959.30	0.98	6.90
<b>Total</b>	<b>83.10</b>	<b>538</b>	<b>153.60</b>	<b>54.60</b>	<b>1.20</b>

Source: from Ityavyar on health services inequality in Soc.& med. (1988), vol.27 no. 11 p 1227. no. of hospitals beds and bed ratios are in thousands. Populations are expressed in millions.

Table 3. 2 Distribution of hospitals, dispensaries and health centres in Nigeria-1979.

States	Area in Km <sup>2</sup> (000)	Hospital per Km <sup>2</sup>	Population per (000) dispensary	Population per (000) health center
Anambra	16.70	0.22	110.80	93.40
Bauchi	18.00	1.49	21.50	599.50
Bendel	39.70	0.63	15.80	43.80
Benue	69.70	4.60	92.30	121.80
Borno	146.60	10.50	35.20	32.00
Cross River	35.10	1.18	43.90	2572.00
Gongola	113.70	9.50	22.60	770.00
Imo	13.20	0.21	64.70	142.00
Kaduna	43.00	1.60	27.40	6063.20
Kano	42.60	2.70	64.20	1067.90
Kwara	73.40	3.30	38.40	362.30
Lagos	14.70	0.51	22.20	31.30
Niger	17.30	3.50	33.90	252.50
Ogun	13.60	0.61	18.20	764.80
Ondo	14.40	0.60	25.20	59.20
Oyo	17.60	0.30	30.60	80.00
Plateau	31.30	2.10	20.90	1499.00
Rivers	11.20	0.45	62.00	133.90
Sokoto	159.10	22.70	58.90	479.60
Nigeria	890.90	1.69	34.30	202.00

source: Tables 3.1 and 3.2 are derived from Ityavyar (1988) Soc. Sci. Med. no.11 page 1227.

Most of the health services provision are concentrated in

urban areas as stated earlier in Chapter 2. Moreover, as indicated in the above tables there are very high ratios of the population to the level of provision. Rivers State, seems to be amongst one of the states with poorest provision. Inadequate provision results in the utilization of foreign health services by the ruling class and the rich while the poor resort to traditional medicine, drug vendors and quacks. It may be argued that because the military and the rich who are the ruling class, have access to the best international health services available they do not care to make adequate provision for the general populace. This is depicted in the annual budgets made and the amounts allocated to health as indicated in Tables 3.3 and 3.4. It is clear in Table 3.3 that health care has never been allocated up to 4% of the total budget. The budgets over the years as shown in Table 3.4 indicate that defence and administration are of higher priority to the government. Similarly, transport and civil aviation are also considered more important than the health needs of the nation. The amounts allocated to health gradually diminished over the years with the exception of 1989 with 3.1%, where the percentage allocated equalled the amount in 1983, but by 1989 the amount allocated to health was less than half of the sum allocated in 1983.

Table 3.3 Federal Government Expenditure on Health 1980-1989 (N in Million)

Year	Amount	Percent of Total
1980	190,98	1.58
1981	250,90	2.24
1982	90,75	1.15
1983	254,50	2.21
1984	131,20	1.32
1985	199,40	1.65
1986	320,40	2.77
1987	236,40	1.35
1988	443,20	1.82
1989	452,60	1.50

Source: Central Bank of Nigeria, in the Nigerian Economist (1989) 2-16, 27.

Table 3.4 Sectoral Distribution of Federal Government Annual Budgets: 1983-1989.

	1983	1984	1985	1986	1987	1988	1989
Recur exp Nm	4708	6072	5473	5636	10775	13709	20810
Cap. exp Nm	5283	2052	5803	5946	6742	10658	9279
Tot exp Nm	9991	8124	11276	11582	16887	24367	30107
Allcn tot % Prod	9.6	6.0	9.7	16.4	3.8	6.5	3.7
Agriculture	5.6	5.1	3.0	6.8	1.6	1.8	1.4
Mining	1.5	0.4	4.7	7.3	0.9	3.3	1.2
Manufacturing	2.5	0.5	2.0	2.3	1.3	1.4	1.1
Economic Service	17.6	9.7	8.6	10.3	5.3	8.6	3.2
Commer & Finance	1.3	3.5	2.7	3.6	2.2	4.7	0.2
Power	1.2	0.2	1.2	1.2	0.5	0.3	0.2
Trans & C'ati	15.1	6.0	4.7	5.5	2.8	3.6	2.8
Social Services	13.0	16.0	9.3	13.8	5.9	7.1	9.2
Education	8.8	10.1	4.9	9.5	3.9	4.6	7.0
Health	3.1	2.3	1.9	3.1	1.4	1.9	1.5
Soc. dev.	1.1	3.6	2.5	1.2	0.6	0.7	0.7
Environ Serv.	13.0	7.4	3.5	4.5	2.5	3.8	3.0
Water & Sewer	9.0	4.5	1.2	1.2	0.6	0.9	0.8
Housing	3.8	2.8	1.9	3.2	1.9	2.2	1.9
Environ plan	0.2	0.1	0.4	0.1	0.2	0.7	0.3
Defence & Secur	19.1	17.5	9.6	14.6	8.5	9.8	6.9
General Admin	13.2	5.7	8.0	8.9	11.5	11.7	11.3
Transf States*	14.3	36.7	47.8	31.4	62.5	52.7	62.7

Source: Ukwu I U (1989) "Rural Development Policy and Programmes in Nigeria: A critical Review", mimeo.\* The substantial increase in transfers to the states may be due to the creation of two additional states in 1987.

The budgetary allocation pattern is thus tantamount to a complete neglect of the health of the masses, knowing that the country is completely technologically dependent on the west for supplies even for minute health facilities such as syringes and needles. Almost every facility needs to be purchased and if enough money is not budgeted for such items, but diverted for use in personal and individualized treatment then service provision is similar to one that is nonexistent. The effect of such attitudes is apparent in high mortality rates and is depicted as the World Bank (1989) clearly observes, in a 25 percent decline in the Gross National Product (GNP) between 1987 and 1989.

### 3.9.0 Summary

This Chapter has examined the TBA practice globally; but concentrated more on their practice in Port-Harcourt. TBAS

and traditional healers or herbalists are found in most societies and constitute part of the local community. The second section examined the hospital as it relates to pregnant women. The focus being on bureaucracy, facilities available, the quality and cost of care.

In Port-Harcourt the hospital is evaluated as a social organisation while the experiences of pregnant women within the hospital and their responses to bureaucracy, quality and cost of services are studied. The inadequacy of hospital services in Nigeria ensuing from inappropriate budgetary allocation by military rulers was also highlighted. This experience is exacerbated by the dependency role in which Third World countries find themselves, for it is impossible to provide adequate health without materials which can only come from the west. It is in the midst of this experience that pregnant women make their choices.

The role of WHO in trying to curb maternal and infant mortality by encouraging member countries is inevitably evident. WHO has addressed the issues of TBA training, TBA practices including prenatal care and delivery services, Newborn care and the cost of TBA services. Also discussed is the transition within the TBA practice in the area of training and alternate roles in modern health services. The emergence and dominance of the medical profession in obstetrics is commented upon. It is evident that there are useful aspects of TBA practices which need to be co-opted.

The questions that readily spring up to mind are: why do women go for massage with TBAs, how can nurses cope with the new social support role, which is repeatedly stressed as an important issue in the use of hospital services by women in the Third World. It is immediately obvious that the TBA is embedded in the society and only women who use her services can say what they gain. This study thus seeks the answers from them.

## Chapter 4

### Methodology and Data Collection

#### 4.0 Introduction

In Chapter 3, TBA practice in Port-Harcourt was discussed. The focus in Chapter 3 was the co-existence of TBA practices in modern urban cities with many hospitals, clinics, health centres and maternity homes. The evidence was that TBA services were more pregnant women friendly compared with hospital services which are bureaucratic, lack facilities, low quality, and high cost. These factors affect pregnant women's choices in favour of TBA services.

In this chapter emphasis is on ethical considerations in this study, the methodologies used in data collection and statistical models used for analysis. It is essential to define and justify the methods and models. The in-depth and qualitative data were collected to ask questions not found in the 1990 NDHS data and provide answers to them. The data collected also served the purpose for comparative utilization patterns with the 1990 NDHS data. A total of 700 pregnant women were interviewed at hospitals, health centres and TBA residences during their antenatal visits in Port-Harcourt.

#### 4.1 Background

Most of the relevant literature on non-utilization of hospital services in the Third World suggests the issue of availability as a major reason. For example, either the hospitals do not exist in relevant locations or there is poor infrastructure or transport is difficult or costly to use. In order to control for the availability issue, this study was carried out in Port-Harcourt where modern hospital facilities are in abundance. At the time of the study, there are altogether three hundred hospitals, clinics, and

maternity homes yet TBAs have a flourishing business. Ekanem *et al.* (1975) noted that a majority of women did not stress lack of availability as a major reason for reliance on TBAs. This observation indicates that even if maternity clinics increased, rural women would still patronize TBAs. The current observation is that TBA utilization in Port-Harcourt cuts across all social classes, irrespective of educational qualification or type of place of residence. There is the existence of a group of women we have labelled "dual utilizers" who go for antenatal care both at the hospital and the TBAs. TBAs are partly responsible for the creation of this group. TBAs say they refer their patients to the hospital for tetanus injection because they have found it useful and helpful. This reason given by TBAs for patronage suggest utilization to be result orientated. Thus there needs to be a shift of emphasis from those of availability and accessibility, including cost, to other areas of difficulty in terms of non-patronage of hospitals and utilization of TBA services.

#### **4.1.1 Research objectives**

The focus of this study is on acceptability and the reasons for rejection of hospital facilities and trained health care personnel by pregnant women. The secondary focus is understanding dual utilizers of hospital and TBA services. Another aim is to establish the need for dialogue between women and the providers of health care services. It is not enough to propose solutions, however good they may be, without having some form of consultation with the consumers. This research elicits directly from pregnant women what they desire in obstetric care services. In order to reduce the number of women who deliver without adequate antenatal care it is essential to generate, plan and execute outreach programmes at rudimentary levels within communities. The Institute of Medicine (1988) study on outreach efforts for instance, demonstrates the need to rely less on random knocking on doors and more upon data-based, systematic case

finding strategies.

Therefore this study:

- (1) used survey data to investigate why many, if not most, women in Nigeria prefer obstetric services rendered by TBAs (Alabi 1990),
- (2) investigated, using both survey data and in depth interviews, which factors deter women from utilizing the hospital system,
- (3) studied the dual utilizers of hospital and TBA services,
- (4) aimed to inform policy makers of negative factors in the hospital system, e.g. nurses attitudes, so that such factors can be minimized or removed.

Some specific questions investigated in the in depth study are:

- (1) the adequacy of hospitals services provided for pregnant women,
- (2) women's feelings about the timing of services,
- (3) how costly or affordable is the provision of services?
- (4) what factors determine the timing and sequence of patterns of utilization of both the hospital and TBA and
- (5) factors that determine dual utilizers.

This study aims to provide an improved understanding of the factors related to the use of trained health care personnel. Such an improved understanding, and consequent adjusted medical provision, might lead to increased patronage by pregnant women which would consequently lead to a fall in mortality rates.

#### **4.2.0 Ethical considerations**

There is virtually no field of research, whether it is a sample survey, an observational study or even a secondary analysis of existing data that is immune from ethical



questions or considerations such as informed consent, the protection of the rights and welfare of individuals involved, the risks and the benefits of the research and the avoidance of policy recommendations based on flimsy evidence.

Historically, the Nazi experience revealed that biomedical research tends to place the welfare of human subjects at risk while social research tends to threaten the rights of its respondents. These include overt abuses as well as those forms of harm which include the loss of self dignity, the loss of individual agency and autonomy and loss of self esteem at the discovery of being duped and objectified. Curran (1969) reveals that before 1960 there was little law regulating the research process. Then research was conducted at the researcher's own risk. There thus arose a need to have government's control or involvement to protect the rights and welfare of human subjects and to regulate the conduct of researchers. Curran further asserts that it was the attempt to articulate "reasonable bounds" as distinct from arbitrary establishments of rules of conduct by courts which prompted a need to control and regulate research. Frankel (1972) quoting Chalkeg strengthened the belief that research involving human beings required greater regulation and control.

At a glance the policy stated above directly conflicts with this research. Childbirth is traditionally a private affair. Thus research in this area affects the physical, social and mental health of respondents. An intrusion occurs in the sense that the researcher shares in the personal areas of respondents' lives by asking questions and being physically present to observe and record what goes on in their hitherto private experiences. The interview and observational aspects of this research reaches out to the most private and sensitive areas of women's lives and involved the use of tape recorders, taking photographs and the recording of very

personalised experiences. For example, questions on pregnancy loss and death of children which are painful reminders of a bitter past were asked. However, the resultant effects of childbirth at TBA residences as statistically recorded leads to high infant and maternal mortality (Feyi-Waboso 1989). This, in turn, changes the situation from being a private one to a public one, that is, a social problem. This results in a need for this research to find or suggest a plausible solution to the social problem. This probably explains why several researches have been carried out in this area. Surprisingly women have been very cooperative with researchers and shared their experiences with them (Oakley 1986, Chalmers 1990). Respondents were offered the opportunity to remain anonymous unless they agree to the contrary. That is, they were made to understand the consequences of not remaining anonymous. This responsibility extends to the taking of photographs, and use of tape recordings. There was, therefore, a need to involve respondents by explaining the aims of the research and involving them as much as possible. Thus, any anticipated repercussions or consequences of the research were made known to the respondents.

However, the ethical procedures in this research may be perceived as difficult to implement because some of the respondents are illiterate and may not have understood the implications of the ethical issues discussed. The results of this study show that 93.6% of the women had acquired some form of education while 6.4% had no education at all. A detailed inquiry indicated that amongst those with education who responded; 20.3% had primary education, 48% had secondary education, 9.9% had Diplomas, while 11.6% and 10.% had degrees and professional qualifications respectively. It was thus difficult to ascertain whether or not one had the full voluntarily cooperation of all respondents and have not taken advantage of them. There could, therefore, be a dilemma as to when research objectives override ethical

considerations. Or are some areas of life not researchable and need to be kept sacred? However, the principal researcher and the assistants have the advantage of sharing the same culture as most of the respondents. This is an added advantage over previous foreign researchers who may have had to rely on interpreters, and may have been alienated for certain cultural considerations. This study has the advantage of having respect for the culture and having the knowledge on how to adapt the research procedures, including the explanation of the study, to the local situation and taking culturally appropriate steps to ensure informed consent and to avoid invasions of privacy. For example, wherever necessary the native dialect was used to conduct the interviews. It could, however, be argued that there is a possibility of bias in the use of indigens. This may be a risk but professional knowledge has made it possible for the researchers to be very conscious of it in order to avoid it. Thus, the use of research assistants created a more relaxed atmosphere and built an advantageous relationship based on trust. Similarly, the commonality of a language by the researchers and the respondents reduced fear and lack of understanding.

Although Bok (1982) sees such studies as being a violation of the individual's rights and regards the privacy regulation as being compromised, Bok did not bother to suggest an alternative procedure for such personal research. There is an alternative school of thought that where behavioural research does not involve any personal risks it should only be subjected to the consideration of matters such as voluntary participation, maintenance of confidentiality and protection of subjects against misuse of the findings that applies in this case. Bennett (1967), for instance, maintains that before claims to privacy are asserted, we need to analyze the situation in terms of how damaging the revelation might be to the persons involved, how many others might be harmed and the importance of the

revelation to the general welfare. The result of such an analysis would then be used as a basis for a rational assessment of the values at issue. Bennett, therefore, calls for a "risk-benefit assessment" for settling the thorny issues arising from conflict between the individual's right to privacy and society's need to know.

Another critique of this study could be the assumption of a bias towards westernization in the childbearing process. The assertion may be that women should have the choice as to where to have their babies. It could also be argued that the resultant social problem may not justify the intrusion into people's lives. But it could equally be argued that it may be better to save lives rather than allowing unsafe practices. We note that in developed countries there were midwives, untrained like TBAs, who dominated the childbearing scene about a hundred years ago. Arguably, it may well be that TBA patronage is a developmental phase for Third World or developing countries who still depend on TBAs for various developmental reasons. The results of the research would not restrict women's choices rather it would afford them more knowledge within which to make informed choices.

Another critique may be a possible failure in the maintenance of confidentiality and commitment by research assistants. In this study the research assistants are themselves professionals, that is they include a doctor in community medicine, four sociologists and three social workers, who are well aware of the principles of confidentiality. The research assistants share the same or similar cultures and childbirth experiences with respondents, thereby, eroding such doubts. The doctor is incidentally the chairperson for research in the State's Women's Commission. The Women's Commission dates back to the 1975 "United Nations General Assembly Resolution 3320 (XXX) and 3523 (XXX) in December which called on member Nations to

accord special attention to Government programmes and projects aimed at the full integration of women in Development". The commission had been mandated by Government to carry out researches into problems affecting women and make recommendations to Government. Amongst the eight functions assigned the Commission, the third is to "promote responsible motherhood and maternal health of women".

It may also be argued that the ethical implementation could affect the research in two possible ways. First, it might have led to the cooperation and involvement of respondents in the research and make it successful. Second, it empowered respondents to opt out of the study, which may have resulted in low participation by respondents. This is true but the study is fair and respected people's rights while still having a worthwhile voluntary outcome.

The question arises whether there are alternatives to the proposed methods. Zweig (1949) as quoted in "Doing Feminist Research" (Oakley, 1986) defended the method of research of "casual talks" on grounds that telling people they were objects of research met with "icy reception" and that finding out about peoples' lives is much more readily achieved on the basis of friendship than in a formal interview. Corbin (1971) also shares the same view; "simply because I am a woman and a wife and shared interests with other wives helped to make the relationship a relaxed one". Hobson (1978) also had the same experience in her research. Oakley's (1986) study of women and their doctors, recorded women's experiences and their feelings in the birth process by following them from pregnancy to delivery; but ethical considerations prevented her from sitting in consultations with doctors. Oakley, however, stressed the importance of deviating from the traditional ethical rules of not having a close relationship with respondents. Oakley felt the process of just eliciting information and not having a rapport with respondents was exploitative, and the

researches undertaken by Oakley showed the practicability of building a close relationship with respondents, which in turn provides a richer data than the impersonal methods of just administering questionnaires or having telephone discussions which are void of close relationships. It, thus, shows that for some research that involves personal issues it would be worthwhile using qualitative methods as well so that the in depth factors could also be solicited. Indeed, this is one of the strengths of this research. It is designed to give women the opportunity to influence policy which is related to the experiences significant to them.

The ethics of some research which have merely commented upon this experience must be questioned. This research seeks to redress the balance. Considering the above experiences, this research combines quantitative data with the richness of qualitative data to create an invaluable content, making up for the omissions in the quantitative data.

#### **4.2.1 Strict ethical procedures implemented**

Written permission was obtained from the ethical committee of the University of Port-Harcourt Teaching Hospital (UPTH) following submission of the study proposal. Similarly the University of Southampton had to make a recommendation and the Nigerian Government gave permission before the 1990 NDHS data could be used for analysis. The following ethical procedures were strictly adhered to in the field before commencing this research:

- (1) There was a fair explanation of the objectives of the study and the procedures to the respondents.
- (2) There was a description of the attendant discomforts and risks.
- (3) A description of the benefits to be expected were explained.
- (4) Respondents were made an offer to answer all questions concerning the research and the procedures

involved.

- (5) Respondents were offered the freedom to withdraw from the study at any time.
- (6) Respondents were assured that refusal to participate in the study or withdrawal from it would not cause them any harm or penalty.
- (7) The respondents were assured of anonymity where necessary.

Respondents were not subjected to risk factors such as;

- (1) Respondents were not pressurised to participate in the study.
- (2) There was no deception as to the aims of the study.
- (3) Their privacy was not invaded (that is, their private experiences were not researched without their consent).
- (4) No information elicited has constituted a breach of confidentiality.

Another ethical requirement expected to be fulfilled in this research is disseminating the results. Greater use of the media to provide education and valuable information cannot be overemphasised. Television as a powerful tool could be used extensively in urban areas. Similarly the widespread availability of radios in both urban and rural areas would be used as a medium for communication in preparing women for pregnancy and delivery.

The implementation of the above ethical principles in this study ensured respondents a reasonable position to maintain their autonomy and allow them a sense of control over what they would say in the course of the interviews. Inevitably, one conclusion under these guidelines is that respondents are far from being defenceless.

#### 4.3.0 Justification of the methodology

Hill and Graham, (1988) have suggested the need to reconsider existing services before collecting new information. Detailed information on obstetric services obtained in pregnancy, childbirth and the puerperium is relevant at the individual women's level and at the aggregate level. At the individual's level, such details constitute an essential component of case management procedures. At the aggregate level, the information could be utilised for planning, monitoring and for evaluating routine services providing maternity care, either for government or private facilities. It could also be used to identify and locate women who have no access to such facilities and are not receiving care.

Information from many developing countries reveal levels of coverage, which reflect factors related to the supply of services ("service factors") and those related to utilization ("user factors"). show wide variations within and between countries and world regions (Leslie and Gupter 1989; WHO 1989). However, where data on both prenatal and delivery care are available for the same population, the percentage coverage of the former is almost invariably higher than of the latter (Royston and Ferguson, 1985). This may reflect different patterns of utilization of prenatal and delivery services rather than differences in the availability. It is usually difficult to consistently separate the two.

Interpreting maternity care variables from the perspective of the woman rather than the child is comparatively rare. The most common approach adopted for the analysis of maternity care data from large scale surveys is birth based, the primary unit of analysis is births rather than women. Usually information is collected on all births in a specific reference period, even if more than one birth occurred to the same women. Each birth is considered as an independent



observation. This process may be inappropriate when information is used to identify women for targeting of care, because women with short birth intervals will be over-represented in birth-based approach. Also outcomes for each birth from the same woman would not be independent and independence is assumed for most statistical analysis. Such a difference of emphasis has implications for the analytic procedures used, the woman becoming the primary unit of analysis rather than the child and also for the differentials in maternity care. Evidence from in depth studies could assist in the interpretation of the survey data even in the absence of data on health outcomes in the women themselves.

The overall methodology used in this study is triangulation: comprising a combination of a secondary analysis of survey data as well as the analysis of a locally administered questionnaire backed up by personal interview and observation. Triangulation is defined as the use of two or more methods of data collection aimed to explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint and in so doing, by making use of both quantitative and qualitative data. Warwick and Pettigrew (1982) suggested that "In complex areas of policy or where public debate about the research is likely to occur, multiple rather than single methods should be used". Exclusive reliance on one method, therefore, may bias or distort the researcher's picture of the particular slice of reality being investigated. It is important to be assured that the data generated are not simply artifacts of a specific method of collection. Such an assurance can only be generated when different methods of data collection yield substantially the same results. However, this is not to say that single method researches are invalid. It is nevertheless essential that this research be as extensive as possible since the issue of TBA practice and utilization as well as the safety of TBA services has been controversial

and subject to an ongoing debate and concern.

#### **4.3.1 Sources of data used in this study**

Several sources of data have been used. First, data from the 1990 NDHS data is analyzed: investigating demographic and socio-economic factors related to the use of trained health-care personnel. The 1990 NDHS interviewed 9,200 women of reproductive age. The health component in the DHS core questionnaire includes information on prenatal care and assistance at delivery. Specifically women are asked to identify the type of personnel providing prenatal care and assistance at delivery. Appendix 7 contains a sample of the actual questions used. These questions are used as indicators of the extent to which the respondents relied on trained health care personnel.

The demographic component in the DHS core questionnaire includes a detailed birth history which provides for each child its date of birth, survival status, and, if appropriate, age at death. The DHS core questionnaire also provides information about various demographic and socio-economic variables such as respondent's level of education, region of residence, and so on. These variables are used to investigate demographic and socio-economic differentials in prenatal care and assistance at delivery.

Second, fieldwork was carried out in Port-Harcourt, to investigate in depth reasons for not using health care personnel. This has been done at different stages. First, the interview of 700 women at hospitals, health centres, and TBA residences. Second, providers of obstetric services; that is, TBAs, obstetricians and nurse/midwives were interviewed. Third, 17 women were followed up from their first and second trimesters of pregnancy till delivery to note changes in patronage patterns and reasons for such changes.

The local questionnaire was administered in Port-Harcourt because of the limitations of the NDHS data. The NDHS data on prenatal care and delivery, records only the most qualified personnel seen by the respondent. (Model A questionnaire - Basic documentation questions 225, 404 and 405 pages 8 and 35, Ondo State DHS Survey September 1986 - January 1987). In the DHS Ondo State Survey, no questions were asked on the times pregnant women were seen and at what point they had their first check-ups. Another restrictive factor is the classification of TBAs with relatives and others under one category of "unqualified personnel". This information does not reveal precisely the role or influence of the TBA on utilization. The 1990 NDHS data corrected all the anomalies just stated about the Ondo State DHS. In the 1990 DHS data women were asked and probed for all persons seen both for antenatal and assistance at delivery. This makes the analysis of the data more reliable.

Thus the survey data are limited in nature. Although the 1990 NDHS data shows what other services the pregnant woman utilized, it does not provide the reasons for such patronage. Fortunately by asking for other "carers" utilized, it has confirmed the important group of "dual utilizers" identified in this research. This group is very important in that they help indicate the factors that attract them to a particular service at any point in time. It is the in-depth study that highlight such factors. The in depth study also allowed the observation of the sequence of patronage and other demographic and health factors omitted from the DHS questionnaire.

All the local questionnaires were administered by interview because postal communication is unreliable in Port-Harcourt, some of the respondents are illiterate and the lengthy questionnaire needed guidance in filling it. Another reason was the ease in locating pregnant women and service providers at points of service delivery in antenatal

clinics. Finally, the personal interviews highlighted factors that were omitted in the questionnaire and brought up during interview.

Three groups of women emerged after the interviews:

- (1) those who use hospital/health centres services only,
- (2) those who use TBA services only and
- (3) finally dual utilizers, that is, those using both services concurrently.

Additional information was gathered from 5 service providers from each group or sector, that is, doctors, midwives/nurses, and TBAs. They were observed and interviewed in detail.

Out of the 700 respondents, 10 women in early pregnancy that is, within six months of pregnancy, were selected randomly from each group for the qualitative study in the summer of 1991 up to the summer of 1992. 17 were successfully visited at regular intervals by research assistants until they delivered. Some of the women dropped out because their husbands did not consent to the study, some miscarried, while others could not be traced to their residences since current street maps were not readily available at the time of the research. All interviews were tape recorded and dated. These visits ensured a record of their behavioural patterns and responses to the services.

An important factor to note about this study is that it solicited women's views directly as to why they prefer one service to another, rather than inferring their views from demographic and social factors alone. Oakley (1986) describes qualitative research as a marriage relationship which is able to solicit the innate feelings of respondents. This is particularly important as pregnant women may become very stressful in the third trimester and are more likely to reveal the pressures they feel and their opinions at that

time. In fact, Oakley's studies confirmed that women built up confidence in their interviewers and shared their experiences with them.

It is the need to achieve and maintain this close relationship as well as observe any changes in patronage patterns that required the research assistants to maintain a link with the respondents. The documentation and recording, however, was followed-up by the principal investigator in the summer of 1992. This enabled an in-depth study of issues that were not solicited during the questionnaire administration. Observation and photography of the physical surroundings and facilities available both in the medical sector and at TBA residences were seen as important and recorded. Photographs were taken to show a pictorial view of what services are provided, for example, antenatal care practices and drugs used. Such dramatic evidence as photographs could be used to inform and convince policy makers where dry statistics could not. For instance, a hospital ward visit during a pilot study (Dagogo, 1985), observed that two women in labour had to share a bed.

#### **4.3.2 Questionnaires used in the study**

A questionnaire is a tool designed to gather information in order to establish a fact or test a hypothesis. Questionnaires may be structured or unstructured. Similarly, questionnaires may have open or closed questions. For ease of analysis of quantitative data, structured and closed questions are preferable. On the contrary, in qualitative research open ended and unstructured questions are used. Coding and analysis of such responses are more difficult, but allow options and provide opinions to be expressed that may not otherwise have been known. In this research both types are utilized because the data gathered comprise both quantitative and qualitative components to enable a more thorough piece of research.

Conscious effort is made while wording and phrasing questions to avoid ambiguity, put a focus on the area of research and the sensitivity of respondents. It is important for questionnaires to be designed properly so that respondents understand the objectives of the survey and give the appropriate responses. A good questionnaire aims to minimize errors in the data collected. For further details on questionnaire design see Glastonbury *et al.* (1991).

Five questionnaires were designed in total for the administration of the in-depth study, the different interview schedules of care providers and the follow-up study of 17 women from early pregnancy to delivery.

#### **4.3.3 In-depth study questionnaire**

A questionnaire with 119 questions was designed for the local administration of the in depth study in Port-Harcourt. The questionnaire is inevitably long because of the detailed nature of the study. Some of the questions have been directly lifted from the DHS model questionnaire (these are general questions on demographic and socio-economic factors), for example, questions 2, 5, 8, 9 and so on, while other questions have been modified to get the detailed responses sought relating to patronage patterns. This is essential in order to compare the in depth study population with the 1990 NDHS data. Some difficult questions relating to relationships with partners were asked, in order to identify their significance, if any, on the pattern of patronage, for example, questions 93 and 101.

Questions 1-17 record the respondents background Questions, 18-75 are on reproduction generally, but specifically designed to elicit obstetric behaviour and potential causative factors. For example, questions 26 and 27 enquire whether the pregnant woman had any links with a TBA even before she was pregnant. A complete birth history was taken but with a more detailed record of the past five years, that

is, from 1987 onwards (similar to the NDHS data). Specifically, the pregnant woman's previous birth and abortion history, previous obstetric service patronage, distance and cost of patronage are all factors that are being studied to determine their effects on patterns of patronage.

However, prior to going to the field, as a second pretest, the researcher administered the questionnaire to six African female students and students' wives at the University of Southampton; four had some children born in Africa. Most of these females were educated and were living in urban cities and towns in their countries and so served as a representative sample to indicate the influence of variables like education and urban residence on TBA knowledge and patronage. All six respondents knew about TBAs while two had actually utilized them for massage.

Data collected includes dual utilization (hospital & TBAs), the sequence of utilization and links between TBA and the hospital, for example, hospital referrals from TBAs. Data on the feelings of the pregnant woman about the health care providers was also collected. The respondents were also given the opportunity to describe their dislikes if any, about the two service institutions, and ways of improving them.

Do significant others of a pregnant woman influence her patronage pattern? Is education likely to play a role in a husband/partner's choice for his wife. There was also an attempt to find out if the occupation of a pregnant woman or her husband played any role in her choice of obstetric care and whether this choice is directly or indirectly related to her income.

#### **4.3.4 Questionnaires for care providers**

Three different questionnaires were designed for the

interview of obstetricians/gynaecologists, nurse/midwives and TBAs. The questionnaire for obstetricians has a total of 27 questions (Appendix 4) requesting details of their length of practice, the mode of their practice and system, their knowledge of women's experience in hospital service utilization, knowledge and contact with TBA practice and links with their hospital practice.

The questionnaire for nurse/midwives has 25 questions (Appendix 3) and requests details of their length of practice, type of care provided for pregnant women, their knowledge of TBAs and the use of their service by pregnant women.

The TBA questionnaire has 51 questions (Appendix 2) requesting details of their background characteristics, their training, if any, their practice, their links with hospital, the type of women who patronize them and why they patronize them?

Finally, the follow-up study questionnaire, designed as a guide to study women's patronage patterns has 34 questions (Appendix 5). The questions in addition to soliciting their background characteristics, requested details of their husbands' occupation, their reproductive history, their anxieties in the current pregnancy, their patronage patterns and reasons for patronage patterns.

#### **4.4.0 Sample Implementation**

The sample size planned was 900, but 700 respondents were interviewed as a result of time constraints and refusals. There was about a 30% refusal rate for various reasons such as length of time waited, tiredness, need for remuneration and other reasons. However, 700 is quite substantial compared to 252 women from Rivers State interviewed as part of the 1990 NDHS. A large sample is aimed to reduce sampling error and to compare with the results from the analysis of



the 1990 NDHS data. The research assistants were interviewed at the end of the data collection to ascertain the completeness of their coverage. The qualitative study described earlier served as a final post-survey test. The use of tape-recorders also served as a check.

#### **4.4.1 Data collection for in-depth and qualitative study**

This section relates details of data collection for the in depth and qualitative studies. These data were collected to ask questions not found in the 1990 NDHS. This section presents a comparative analysis with the 1990 NDHS data. A total of 700 pregnant women were interviewed at hospitals, health centres and TBA residences during their antenatal visits in Port-Harcourt. Information and reasons for choice of patronage patterns were directly elicited from the women. Emphasis was laid on single, and dual utilization. It was discovered that dual utilization was also practised within the traditional as well as the modern health service systems and not just across the two systems. Thus it was not uncommon to observe that a woman is registered at a health centre and at the hospital, or registered at two different TBA residences, or even at the health centre, hospital, with a TBA and at a maternity home.

#### **4.4.2 Implementation of data collection**

The data collection was undertaken in different stages and within different time scales. The quantitative data was collected over a period of two months; from 23 September to 24 November 1991. The interview of care providers was conducted in the same period; the five nurse midwives were interviewed the same day. The consultants were interviewed on four different days as it was more difficult to schedule interview times with them. TBA interviews were also difficult to schedule as they were frequently interrupted by patients. They were eventually completed on five different days.

#### 4.4.3 Interviews of respondents

The interviews were conducted in the antenatal clinics of hospitals and health centres and at TBA residences where pregnant women were readily available. In the hospital and the health centres the first two hours were devoted by hospital staff to routine activities during which time the research assistants were introduced and the subject of the research explained to the women within the normal antenatal talks. The women and the research assistants got acquainted at this time before commencing interviews. However, at TBA residences the procedure was not as organised as it was in the modern centres; at TBA residences women streamed in leisurely, with no formal forum to address or meet them as a group. Sometimes there could be as many as ten women, at other times there may just be two women or even none and suddenly some women may show up. So it was more difficult to conduct interviews in that one may have to repeat the purpose of the research "a" number of times and to "various" numbers of women and the privilege of interviewing in privacy was not easily attainable at TBA residences.

The nature of the study necessitated a catalogue of personal details such as: name, address, length of gestation and so on and so the questionnaire was quite lengthy. Another reason for the personal details was the follow-up qualitative study which required visits to women's homes. Some women did not give these details, while some others gave incomplete/incorrect information because they felt their husbands would not allow visits at their homes.

The follow-up study which went on for a period of nine months commenced on 25 November and terminated at the delivery of each respondent over several months with the last being at the end of September 1992. Inclusion of women into the follow-up study was done at random from the three groups of women who emerged at the end of the data collection. The three groups were those who used hospital

alone, those who used TBAs alone and finally those who utilized both forms of services. Table 4.1 below shows the pattern of utilization of antenatal care for current pregnancy and is especially significant in that only 53 out of the 700 women were met at TBA residences during the survey.

Table 4.1 Percentage distribution of type of Antenatal Care Service Utilized by 700 women in Port-Harcourt in Current pregnancy - 1991

Type of service	%	No.
Doctor & nurse/midwife only	48.8	333
Doctor, nurse/midwife & TBA	20.2	138
Nurse/midwife only	16.3	111
TBA only	3.8	26
Doctor only	3.1	21
Doctor, nurse/midw & priv. clinic	3.1	21
Nurse/midwife & TBA	2.5	17
Other combinations	1.2	8
Doc.,Priv. clinic & TBA	.6	4
Doctor & Priv. clinic	.3	2
Nurse/midw & priv. clinic	.1	1
No response	2.6	18
Total	100.0	700

\*% does not total to 100.0 due to rounding.

#### 4.5.0 Project personnel

The researcher helped the eight research assistants administer the in depth questionnaires, solely conducted the interviews of care providers, while four research assistants conducted the follow-up interviews through monthly visits to the 17 respondents in their homes.

#### 4.5.1 Training of research assistants

The lengthy questionnaire with personal and sensitive questions required professional research assistants to administer effectively. `Well trained and experienced personnel can usually persuade respondents to answer sensitive questions´ (Wooward and Francis 1988). A three-day training programme which included a day's practical live-trial at one of the hospitals was carried out with eight research assistants from 20-22 September 1991 by the researcher prior to commencement of data collection.

Training involved the explanation of the sequence of questions, possible responses and how to record them. Practice interviews were conducted on the second day in one of the hospitals. The research assistants always had access to the researcher if they had any difficulty in the course of interviews. This was the situation until they were familiar with the questionnaires. Initial interviews per respondent lasted one hour but later stabilized at thirty minutes per questionnaire.

#### **4.6.0. Data collection**

The emphasis in this section is on the details of the procedure used for the data collection; first in the hospital/health centres and then at the TBA residences. Details of access, and difficulties are also highlighted.

#### **4.6.1. Hospital data**

The University of Port-Harcourt Teaching Hospital runs five antenatal clinics every week (Monday through Friday), headed by a different consultant each day. Clinics are run from 7.30 am to 1.00 pm. Pregnant women are registered under the various consultants hence researchers only met pregnant women on their different clinic days except when they came in as emergencies. The appointments for women ranged between 2 weeks and six weeks of each of their visits, so the period of the research afforded researchers the opportunity to meet every woman registered at the hospitals or health centres.

#### **4.6.2 Access**

On arrival at the hospital both researcher and assistants were formerly introduced to nursing staff on duty to enable interviews to be conducted. The initial plan was to conduct all interviews at the UPTH but nurses suggested the inclusion of the Braithwaite Memorial Hospital (BMH) and Comprehensive Health Centre Orogbum and Churchill Health Centre. The hospital and the health centres were all state owned and charge one fifth of the UPTH registration fees.

The inclusion of these centres in the study is expected to provide a significant diversity of the respondents and a more representative sample of Port-Harcourt. It may contribute in the study of cost of services. However, this extension inevitably resulted in the researcher moving from one hospital to another in order to supervise research assistants thus resulting in divided attention. Permission was easily obtained from the heads of the clinics, especially when informed that the same research was being conducted at the UPTH.

#### **4.6.3 Refusals to interview**

About 30% of the women refused to be interviewed so the number to be interviewed in each location was no longer limited in each centre or hospital. It depended on willing respondents only. The reasons for refusals included:

- (1) women had other engagements that needed urgent attention,
- (2) women had already spent long waiting time to see the doctor and so can no longer spend more time for interviews,
- (3) women were too tired to talk, advised researchers to come back next clinic day,
- (4) women needed to be paid, or entertained for interviews,
- (5) women were simply not interested,
- (6) some women felt their husbands would not approve,

Reasons 1, 5 and 6 were similar to those given by participants in St. Clair *et al.*'s (1989) study. It suggested that the refusals were made because women were made aware of their rights of choice in participating in the study. This is also in accordance with the ethical principles of voluntary participation.

#### **4.6.4 Conduct of interviews in hospitals/health centres**

Research assistants reported at each of the four centres

every appropriate morning to conduct interviews. Two of the centres had their clinic days on only Mondays, Tuesdays and Thursdays. Three research assistants were deployed to the UPTH, two to each of the two health centres and one at the Braithwaite Memorial Hospital. On Wednesdays and Fridays when the health centres were not functional all research assistants converged at the hospitals. The first two hours were devoted by hospital staff to routine activities during which time the research assistants were introduced and the subject of the research was explained to the women within the normal antenatal talks. The women and the research assistants got acquainted at this time. After antenatal talks each pregnant woman was interviewed separately to allow for privacy and confidentiality.

#### **4.6.5 Photographs**

Only three respondents agreed to be photographed. Photos of two nurses attending to their patients were also taken. Photos were taken because they represent vivid evidence of reality in the provision of the services.

#### **4.6.6 Difficulties**

The research assistants always had access to the researcher if they had any difficulty in the course of interviews; this was the case until they got familiar with the questionnaires. Initial difficulties encountered by the research assistants included worries about skipping so many questions while interviewing respondents with first pregnancies and single utilizers, as most of the questions were not applicable to such respondents.

Another difficulty was that about 20% of the women were reluctant to grade or state preferences for the services utilized. The research assistants were asked to record "no response" for such questions rather than persuading women to give any response to please the research assistant.

The fact that women had to see their doctors caused a break in the interviews and tended to make some women rush to finish their interviews. Some who saw the doctors first, could not wait to be interviewed. There was yet another group of women who insisted on either being paid or entertained before granting us interviews.

It was more difficult getting the consent of women who patronised TBAs for interviews. It was difficult for research assistants to get to TBA residences as early as 5.30 am in the mornings so it not clear whether those who visited TBAs very early would have been more cooperative. It may be argued that such women have time pressures which necessitated them to visit at early hours and may not have granted interviews.

Another difficulty experienced was peculiar to a particular TBA. Her environment was unclean and had a strong stench which made it very uncomfortable for research assistants to remain and conduct their interviews. It took extra determination to remain in her residence. The TBA explained that the smell resulted from the placentas she had buried in the back garden.

#### **4.6.7 Observation**

One observation which emerged during interviews was that most women did not register until their pregnancies were at least five months old.

#### **4.7.0 Interviews with carers in hospital**

Care providers were interviewed to give their own views on service provision. The interview also aimed to elicit how much knowledge they have concerning women's needs and feelings about the service they provide. Data collected included details of their socio-economic characteristics, history of any contact with TBAs, their training and experience on the job as well as their perceptions of the

service they provide. Questions about feedback mechanisms from patients were also raised.

#### **4.7.1 Nurse/midwives**

The importance of acknowledging the experiences of carers was stressed. After obtaining their consent, five nurses were interviewed as carers. The process of selection was on volunteer basis. The interviews were tape recorded.

#### **4.7.2 Consultants**

Out of six consultants in the Department of Obstetrics and Gynaecology, four were interviewed, each heading a clinic day. The fifth consultant was not available for interview. The interview sequence depended on the ease of accessibility. All interviews were tape recorded and were conducted outside clinic hours because of the busy schedule of the doctors.

#### **4.8.0 TBA's data**

The importance of acknowledging the experiences of carers was stressed and the aim of the study was explained to TBAs. The focus here is on the services of the TBA and their practice, including interviews of women met at her residence. After obtaining their consent, five TBAs were interviewed as carers. The process of selection was on volunteer basis. The interviews were tape recorded. Their perceptions of why women patronised their services was also elicited.

#### **4.8.1 Routine for TBA data**

The TBA routine was quite different from that of the hospital. TBAs have a morning and an evening practice, the usual hours being 5.30 or 6.00 to 10.00 am, and 5.00 to 7.00 pm respectively.

TBAs claim:

- (1) Early morning sessions provide them the opportunity to massage on the empty abdomen which



makes them reach a more accurate diagnosis.

- (2) Working women could also have their massage before going to work. The TBA is, however, available to serve at anytime although she has more patronage at the regular consulting times.

#### **4.8.2 Access to TBA residences and their patients**

There was no register of TBAs in Port-Harcourt although a register of TBAs for rural areas existed. Consequently, information on TBA residences was obtained through informal networks such as friends and during interviews of dual utilizers at the hospitals. The aim of the research was explained to TBAs and they were very cooperative and consented to the interview of their patients, but most of their patients were very uncooperative. This could be due to the following factors. The TBA consultation practice was not as organised as that of the hospital. For the majority of TBAs, there were no sitting facilities or enough space to stay and interview women, there usually was a seat or a bench that could only sit three people just outside the TBA residence or inside a small crowded room which is the TBA's home. It was, therefore, very inconvenient for both women and research assistants to have interviews. Some of the interviews were conducted with the research assistants stooping down. All the women reported at different times, and there was no organised forum to speak to the women as a group. For those who arrive at the same time, they have specific activities: either plucking and chewing leaves, getting ready for a bath or a massage. However, some TBAs spoke to their clients individually to grant us interviews. A good estimate would be that 30% of the women approached were interviewed. Some of the women influenced others to refuse interviews and were hostile and not prepared to listen to the purpose of the interview or the research. In the course of the research we noticed that some women combined the use of more than one TBA. TBAs generally had little control over their patients.



#### **4.8.3 Conduct of interviews at TBA residences**

Research assistants went twice a day to TBA residences to interview patients. TBAs helped persuade some patients who agreed to be interviewed. Here the pattern differed a little bit from that of the hospital, in that some TBAs would see the patient after the interview, in a way, delaying the patient because of the interview. This is because their consultation and treatment or massage is very swift. Where treatment would take longer, for example, in the treatment of infertility, the TBA prepares the patient's mind and a convenient time is chosen for the "fire treatment" which lasts for hours.

#### **4.8.4 Interviews with TBAs**

These interviews went very well and were tape-recorded. Some of the interviews were done in the native dialect and or in pidgin English. One of the five TBAs interviewed required an interpreter because her dialect differed from that of the researcher.

#### **4.8.5 Photographs**

All the TBAs agreed to be photographed but could not all get the consent of their patients. A few of the patients who agreed did not want their faces to be shown while massages were being done.

#### **4.9.0 Follow-up study**

During the interviews a common pattern emerged. It became clear that a lot of the women did not register until their pregnancies were five months or older with the exception of women with first pregnancies and those who were sickly or had problematic pregnancies. This pattern necessitated a change in the sample for the follow-up study, thus instead of limiting it to women in their first trimester we extended it to the second trimester.

Instead of the 30 originally planned, only 17 were

successfully followed up. The number of research assistants was also reduced to four instead from the six originally planned because of lack of funds. Out of the 13 who dropped out of the follow-up study, three had miscarriages and were too distressed to continue. Another six could not be traced either for living in difficult and temporary residences, while the remaining four were prevented by their husbands from participating in the study. The following reasons were given: they did not want facts about their wives taken to England, they did not want strangers coming to their homes and their birth process was personal to them.

#### 4.10.0 Data analysis

Dichotomous data allows each individual to have only one of two possible response outcomes. Dichotomous response data, in demography, for example, represents situations where a woman uses or does not use a service. The main aim being to model the probability of a particular outcome using a set of explanatory variables.

Bishop, Fiendberg and Holland (1975) gave three reasons for fitting models to observational data:

- (1) A model fitted to a data set enhances our understanding of the data.
- (2) There may be a particular interaction or effect that could be assessed by taking account of other factors.
- (3) A good model can provide more precise estimates of expected frequencies than the original data by themselves.

Thus by fitting a model to a data set we can obtain a set of parameters. The parameters are in essence a representation of the structural features of the original data: with the numbers of parameters indicating the complexity of the data.

A binomial logistic model is appropriate when emphasis is on the effects of a number of categorical explanatory variables on a dichotomous response variable. A generalization of the

binomial logistic model is the multinomial logistic model which considers the case of a polytomous response variable. That means the response variable has more than two categories. The multinomial logistic model may be expressed as a set of correlated logistic models. If the response variable has P responses then a set of P-1 correlated logistic models are needed to describe the relationship between the response variable and the explanatory variables.

The method of maximum likelihood estimation is used to obtain the parameter estimates. A detailed explanation of this is given in Bishop, Fienberg and Holland (1975).

The multinomial logistic is appropriate in this research because a number of response variables have more than two categories, for example, obstetric service utilized. Binomial and multinomial logit models will be used to analyze the data on prenatal care, assistance at delivery and obstetric service utilized.

#### 4.11.0 Model assessment

The significance of an explanatory variable is assessed by its inclusion into a statistical model and the improvement of fit. The principle of the improvement of fit is to compare the observe values of the response variable withe predicted values obtained from models with and without the variable in question. In logistic we used the statistic:

$$D = -2 \ln \left[ \frac{(\text{likelihood of the current model})}{(\text{likelihood of the saturated model})} \right]$$

D is -2 log likelihood ratio. D can be expressed as follows:

where  $\pi_i$  is the maximum likelihood estimate of  $\pi(x_i)$  for the

$$D = -2 \sum_{i=1}^n [y_i \ln(\frac{\hat{\pi}_i}{y_i}) + (1-y_i) \ln(\frac{1-\hat{\pi}_i}{1-y_i})]$$

i-th observation. The size of D is the interest in binary logistic regression analysis. A large value of D suggests that the independent variable(s) are not helpful in predicting the response. The statistic D is often called the likelihood ratio statistic while McCullagh and Nelder (1989) call the statistic D the Deviance.

The significance of the independent variable is assessed by comparing the value of D with and without the independent variable in the equation. The possibility of a saturated model to both values of D being differenced, necessitates the change in D due to the inclusion of the independent variable in the model to be expressed as follows:

$$G = -2 \ln \left[ \frac{(\text{likelihood without the variable})}{(\text{likelihood with the variable})} \right]$$

The null hypothesis expressed  $\beta_j$  as equal to zero against the alternative hypothesis  $\beta_j \neq 0$ ,  $j = 1, 2, \dots, K$ ; where the statistic G follows a chi-square distribution with one degree of freedom supposing that the independent variable is either continuous or binary.

#### 4.11.1 Parameter interpretation

The results from a binary logistic regression analysis can be interpreted in three ways. Suppose that the fitted model is as follows:

$$\text{logit}(\pi) = \ln\left(\frac{\pi}{1-\pi}\right) = \beta_0 + \sum_{k=1}^K \beta_k X_k$$

One way to interpret the parameter estimates is as in linear regression analysis, i.e. an increase of one unit in  $x_k$  will increase logit ( $\pi$ ) by  $\beta_k$ ,  $k = 1, 2, \dots, K$ . This is not an easy interpretation since the odds are measured on a log scale. The second way is by using the odds ratios. Because  $\ln(x)$  is a monotonically increasing function, a regression parameter  $\beta_i$  can be transformed to  $100 \times (e^{\beta_i} - 1)$  and interpreted as the percentage change in the odds in favour of a success for a one unit change in  $x_k$  holding other co-variables constant (ceteris paribus). For example, since  $e^{0.4}=1.49$ , a regression parameter estimate of 0.4 corresponds to a 49 percent increase in the odds. The exponential of the parameter estimates can also be interpreted as an odds ratio (the ratio of two odds). For example, if the response variable of interest is use or non-use of antenatal care, the ratio of the probability of use over non-use is of interest. If the dichotomous explanatory variable is level of education (1 = high, 0 = primary) with parameter estimate 0.7. The estimated probability of use not only depends on the estimated parameter  $\beta$ , but also on the values of the other independent variables  $X$ . To calculate this probability for different categories for each co-variate, the other co-variables are controlled at some level. A common strategy is to hold them constant at their means.

If the fitted model contains interaction variables, the association between the interacted co-variate and the response variables differs (Hosmer and Lemeshow, 1989). For example, suppose the fitted model for the analysis of whether a woman uses or does not use antenatal care at the time of the survey contains an interaction variable between the number of pregnancies and the place of residence. The odds ratio for place of residence should be estimated by specifying the number of pregnancies in which the comparisons are being made. For this example, the interaction is best interpreted graphically by calculation the probability of using a type of antenatal service in a

particular pregnancy. The probability of using antenatal care for women with no previous pregnancies living in urban areas is calculated as follows:

$$p(\text{none,urban}) = \frac{\exp(a+b_n \cdot X_n+b_u \cdot X_u+b_{n \cdot u} \cdot X_n X_u+\text{all other variables})}{1+\exp(a+b_n \cdot X_n+b_u \cdot X_u+b_{n \cdot u} \cdot X_n X_u+\text{all other variables})}$$

where a is the intercept,  $b^n$ ,  $b^u$ , and  $b^{n \cdot u}$  are the estimates for number of pregnancies equals none, the place of residence is urban and the interaction term between the number of pregnancies is none and the place of residence is urban respectively and  $X^n$  and  $X^u$  are the co-variate vectors for number of pregnancies equals none and place of residence is urban.

For the 17 women followed up from the second trimester of pregnancy till delivery the 'Ethnograph' package was used to highlight some direct quotes from women and maintain the qualitative nature of the research. It was also used for the analysis of the interview of the care providers as the differences in phrases and meaning of words are looked at and related to the feelings and understanding of women's perspective.

#### 4.12.0 Summary

To summarise, this chapter has stressed the need to detect the level of acceptability and reasons for rejection of hospital facilities and trained health care personnel by pregnant women. The secondary focus was on the understanding of dual utilizers of the hospital and TBA services. Another aim being to establish the need for dialogue between women and the providers of health care services. This is essential to target adequate provision of services in consultation with the consumers to enable utilization. This research directly elicits pregnant women's desires in obstetric care services. In order to reduce the number of women who deliver

without adequate antenatal care it is essential to generate, plan and execute outreach programmes at rudimentary levels with communities. The Institute of Medicine (1988) study on outreach efforts demonstrates the need to rely less on random knocking on doors and more upon data-based, systematic case finding strategies.

Details on methods of data collection have been enumerated. The design of questionnaires and the use of research assistants in the data collection including problems encountered were stated. Cultural adaptations such use of the indigenous dialect were related. The in depth and qualitative studies were carried out to ask questions not found in the 1990 NDHS data and provide answers to them. The data collected provides answers as well as creating a basis for comparative utilization analysis with the 1990 NDHS data. A total of 700 pregnant women were interviewed at hospitals, health centres and TBA residences during their antenatal visits in Port-Harcourt. Information and reasons for choice of patronage patterns were directly elicited from women. Emphasis was laid on single, and dual utilization. It was discovered that dual utilization was also practised within the traditional as well as the modern health service systems and not just across the two systems. Thus it was not uncommon to observe that a woman is registered at a health centre and at the hospital, or registered at two different TBA residences, or even at the health centre, hospital, with a TBA and at a maternity home. Out of the 700 women interviewed, 17 of them were successfully followed up till delivery constituting the qualitative study.

This study thus:

- (1) used 1990 NDHS survey data to investigate why many, if not most women in Nigeria prefer obstetric services rendered by TBAs.
- (2) investigated, using both survey data and in depth study to determine which factors deter women from utilizing



the hospital system.

- (3) studied the dual utilizers of hospital and TBA services.
- (4) aimed to inform policy makers of such negative factors in the hospital system, e.g. nurses attitudes, so that such factors can be minimized or removed.

Some specific questions investigated in the in depth study in Port-Harcourt are:

- (1) the adequacy of hospitals services provided for pregnant women,
- (2) women's feelings about the timing of services,
- (3) how costly or affordable is the provision of services?
- (4) what factors determine the timing and sequence of patterns of utilization of both the hospital and TBA and
- (5) factors that determine dual utilizers.

Ethical principles implemented in the research ensured respondents a reasonable position to maintain their autonomy and allow them a sense of control over what they would say in the course of the interviews. The respect needed for the culture of respondents was easily maintained by researchers who shared similar cultures and had the knowledge on how to adapt the research procedures, including the explanation of the study, to the local situations and taking culturally appropriate steps to ensure informed consent and to avoid invasions of privacy.

The logistic regression analysis is used on the 1990 NDHS data and Port-Harcourt 700 interviews to understand the findings in a statistical context.

## Chapter 5

### Analysis of the 1990 Nigeria Demographic Health Survey data

#### 5.0 Introduction

Chapter 2 records the transitional status of TBAs from being primarily a rural phenomenon to increasingly becoming urbanized. The implication of this in the utilization of modern health services are two fold:

- 1) Modern health services situated mainly in urban areas and cities are not readily accessible to rural women.
- 2) Women conditioned to trusting and using TBAs and their services may be hesitant in giving up TBA obstetric services. In this chapter the use of large-scale survey data for analysis is discussed and the 1990 Nigeria Demographic Health Survey (NDHS) data are described and analyzed to ascertain national patterns of utilization.

#### 5.1 Use of large-scale surveys

The use of large-scale surveys is a relatively unexploited source of data on maternity care. As part of a multipurpose survey the amount of information collected on maternity care is by necessity limited, as is information on health outcomes. When using secondary data, the information available often fails to satisfy completely the research questions at hand as the primary objectives of the data may be different, or not detailed enough. This notwithstanding, it furnishes existing information on relevant issues. For example, it avails the researcher the opportunity to associate patterns of utilization with socio-demographic characteristics but does not give reasons for such behaviour. However, as stated in Chapter 4 such survey data can be supplemented by an in-depth study.

Adekunle *et al.* (1990) analyzed the 1987 Ondo State Demographic Health Survey (ODHS) data to study patterns of maternity care in Ondo State of Nigeria. Their major objective was to identify patterns in the utilization of

maternity care services by maternal characteristics. They used three principal variables which indicated utilization of maternity services: attendance for a pregnancy check-up by person seen, receipt of tetanus toxoid injection during pregnancy and assistance at delivery by type of person assisting (for details of their analysis see Chapter 2 Sections 2.10 to 2.10.4). In this research we repeat the Adekunle *et al.* (1990) analysis for the whole country using 1990 NDHS data but limiting our analysis to last birth in the reference period. Our restriction is implemented for reasons of proficiency because the results were similar in all the births within the reference period. One of the aims of this study is to ascertain the similarities and differences between this and the Ondo State findings. Adekunle *et al.* (1990) looked at births to the same women but due to small numbers and our restriction to the last birth within the reference period of this study, we do not study births to the same women. In the Adekunle *et al.* (1990) study there was no indication of a spread of maternity services so they used other measures such as the availability of drinking water, modern toilet facilities etc. to create 6 surrogate measures of service availability. This study does not use an alternative measure to determine availability by geographical areas; instead it looks at utilization in Nigeria as a whole and specifically in urban areas where availability is not considered an issue.

The 1990 NDHS was a national survey with a sample of 9,200 women aged between 15-49 carried out by the Nigerian Federal Office of Statistics and the Institute For Resource Development, Macro Systems Inc. Columbia, Maryland, USA. The survey data provided information on the demographic and health situation of 8,781 women in the country and information on the health of their 8,113 children. (Note that 2128 women interviewed have never given birth). The information includes: background characteristics of the respondent, a reproductive history, knowledge and use of

contraception, fertility preferences, maternal care during pregnancy and delivery, breast feeding, vaccination status of children, prevalence and treatment of diarrhoea, fever and cough in children, as well as height and weight of children. The 1990 NDHS data thus provides sufficient information to identify the utilization patterns for maternity care and to a lesser extent, their trends, determinants and impact on child health.

Graham and Campbell (1990), give four reasons why DHS data are important sources of information:

- 1) They have potential to address a wide range of health issues and not just those confined to pregnancy.
- 2) Women are often the main respondents.
- 3) The samples sizes are often sufficiently large so as to provide the opportunity for considering health outcomes that are comparatively rare and to discern patterns and trends.
- 4) Major selection biases are avoided, thus presenting the chance to identify the coverage, accessibility and acceptability of women's health services.

Reasons 2 and 4 are particularly relevant to the question of maternity care. The value of surveys has recently been heightened through the greater attention being paid to prenatal, delivery and postnatal care within the strategies launched under the Safe Motherhood Initiative (Mahler, 1987). It could thus be inferred that the most convincing basis for gathering information on maternity care through multipurpose household surveys is the opportunity provided for women themselves to express their needs and opinions on the accessibility, quality and acceptability of services which are intended for their use.

Logistic regression is used for the multivariate analysis. The subgroups of interest and studied are:

- 1) women and their most recent birth in the specified reference period of five years prior to the survey and
- 2) women currently pregnant at the time of the survey.

Recall and accuracy of information on these sub-groups will be more reliable because of how recent the events have been.

#### **5.2.0 Methods of analysis**

For the purposes of the analysis, an examination of the national pattern of utilization of obstetric services is followed by patterns of utilization in Rivers State. The intention to analyze the patterns in the urban areas of Rivers State was discarded due to small numbers.

The demographic characteristics and socio-economic variables of utilizers are examined to ascertain commonalities in patterns exhibited. For example, do the patterns have any relationship with women's age, education, and occupation and/or with husband's education and occupation? The analytical methods are divided into two groups: descriptive and explanatory. The former comprises essentially univariate and bivariate analysis e.g. frequency distributions and cross tabulations. Multivariate methods are applied for explanation.

#### **5.2.1 Descriptive analysis**

This section presents a descriptive analysis of the 1990 NDHS data using various demographic characteristics including age, education, radio and television usage, type and place of residence and others.

Table 5.1 below shows the distribution of women by various characteristics. The largest proportion of women are aged 20-24 (19.1%) and smallest aged 40-49 (7%). 72% of women in the sample are 34 years old or younger. The distribution by education indicates that 57.2% had no formal education, 23.9% had attended primary education while only 17.1% and 1.8% had attended secondary and higher education respectively. The low level of women's education with only 42.8% of women having had some form of education, agrees with the low figures given by Erekosima (1989) and the views

of Oputa (1990) on women's high level of illiteracy. The 1987 ODHS analysis only recorded and used primary education as indicating the highest level of educational attainment for women. This is difficult to understand as there are higher institutions which are quite accessible. The explanation could be that there were a small number with higher education and so it was not worth including them in the analysis as a separate category.

When residence is observed, Table 5.1 indicates that the NDHS is more a rural study comprising of 75.1% from rural and 24.9% urban areas respectively. Childhood residence depicts a similar structure with 70% rural and 30% urban. The results are therefore, more representative of rural rather than urban areas. It is uncertain what impact rural socialization has on TBA and hospital patronage patterns. The provision of modern health services and other infrastructures in urban areas has been extensively discussed in Chapter 2. Table 5.1 shows that only 27.5% have access to electricity. Similarly, 20.1% and 56.6% own television and radio sets. Ownership and use of radios may indicate a level of awareness of health services available, because such services are broadcasted on the radio extensively under Government public awareness schemes.

52.0% of women in urban areas of the 1990 NDHS data in the 5 year period utilized the services of the hospital compared to 48.0% of women in rural areas. For those who utilized TBA antenatal services, we found that 30.7% resided in urban areas while 69.3% resided in rural areas. These figures do not agree with previous figures which suggests that majority of women in rural areas do not use hospital services because of difficulties with transportation, accessibility (Good et. al., 1979, Larsen, 1978, WHO, 1981).

The role of men in obstetric service utilization has not been studied extensively as it is assumed that women who

seek services make independent decisions. Similarly, it is unclear whether marital status makes a difference when women seek obstetric services. A recent study by Donovan (1995) quoting Isiugho-Abanihe (1994) stressed that Nigerian men were dominant decision makers in reproduction and family size. Table 5.1 shows that amongst the women interviewed 70.9% of the women were married while 17.2% have never married and only 1.1% were divorced. The low divorce figures may indicate stability and the value placed on marriages. Women's perceptions on the issue of husband's influence are evaluated in the in-depth study.

Women's demographic characteristics may be associated with their utilization patterns and so knowledge of women's demographic characteristics in the NDHS data will hopefully create a clearer understanding of utilization patterns. Below are some more background characteristics listed.

Table 5.1 Percentage distribution of women's background characteristics in the 1990 NDHS data (Number=8781).  
Characteristics

Characteristics	No.	% incl	% excluding missing
<b>Age</b>			
15-19	1613	18.3	18.3
20-24	1676	19.1	19.1
25-29	1669	19.0	19.0
30-34	1410	16.1	16.1
35-39	954	10.9	10.9
40-45	836	9.5	9.5
40-49	623	7.0	7.0
<b>Education</b>			
None	5020	57.2	57.2
Primary	2099	23.9	23.9
Secondary	1499	17.1	17.1
Higher	163	1.8	1.8
<b>Residence</b>			
Urban	2187	24.9	24.9
Rural	6594	75.1	75.1
<b>Electricity</b>			
Yes	2413	27.5	27.5
No	6357	72.5	72.4
Missing	11	0.1	
<b>Television</b>			
Yes	1762	20.1	20.0
No	7006	72.4	79.9
Missing	13	0.1	
<b>Radio</b>			
Yes	4973	56.6	56.7
No	3795	43.2	43.2
Missing	13	0.1	
<b>Marital status</b>			
Married	6230	70.9	70.9
Cohabit	650	7.4	7.4
Widowed	214	2.4	2.4
Divorce	95	1.1	1.1
Separate	79	0.9	0.9
Single	1513	17.2	17.2
<b>Religion</b>			
Protestant	2963	33.7	33.7
Catholic	1223	13.9	13.9
Islam	4171	47.5	47.5
Traditional	208	2.4	2.3
No Religion	207	2.4	2.3
Missing	6	0.1	
<b>Childhood residence</b>			
City	883	10.1	10.0
Town	1741	19.8	19.8
Rural	6148	70.0	70.1
Missing	9	0.1	

Table 5.1 continues on the next page.



Table 5.1 contd from the previous page. Percentage distribution of women's background characteristics in the 1990 NDHS data. (Number=8781).

<b>Residence With Husband</b>			
Yes	5753	65.5	92.5
No	464	5.3	7.4
Missing	2564	29.2	
<b>Women Currently Working</b>			
Yes	5377	61.2	61.2
No	3403	38.8	38.8
<b>Women's Occupation</b>			
Other Answers	10	0.1	0.2
Agric/Forest	2105	24.0	39.2
Professional	305	3.5	5.7
Admin/Management	35	0.4	0.6
Clerical	27	0.3	0.5
Sales	2544	29.0	47.4
Production	85	1.0	1.6
Service	257	2.9	4.8
Missing	3414	38.9	
<b>Women by Kind of Worker</b>			
Employee	476	5.4	8.9
Own-employment	4849	55.2	90.3
Employer	42	0.5	0.8
Missing	3414	38.9	
<b>Partner's Occupation</b>			
Other Answers	59	0.7	0.8
Agric/Forest	4298	49.0	59.5
Professional	683	7.8	9.4
Admin/Management	71	0.8	1.0
Clerical	118	1.3	1.6
Sales	759	8.6	10.5
Production	204	2.3	2.8
Service	987	11.2	13.6
Student	34	0.3	0.4
Don't Know	3	-	-
Missing	1564	18.0	
<b>Partner's Level of Education</b>			
Primary	1771	20.2	24.6
Secondary	1008	11.5	14.0
Higher	297	3.4	4.1
None	4115	46.9	57.2
Missing/NA	1590	18.1	

\*(Percentages may not sum to 100% due to rounding)

### 5.3.1 Understanding the background characteristics

Table 5.1 above also reflects the structure of Nigeria in terms of religious affiliation into two main groups, with Moslems (Islam) 47.5%, and Christians (Protestant and Catholic), 47.6%. A minority (2.4%) still cling to traditional religion and 2.4% have no religion. The 0.1% missing may be accounted for by non response. There are also cases of people combining various forms of faith. Religion could form an important component in patronage patterns as

there are restrictions in some belief systems. For example, it may not be acceptable for male gynaecologists to examine female Moslem patients. The difficulty with this is that there are very few female gynaecologists. Similarly, some Christian sects like the "Jehovah's Witnesses" are reluctant to accept blood transfusion and so treating such patients may be difficult for doctors in cases of emergency.

The possible influence of women's partners in decision making had earlier been discussed in this Chapter. However, it is not clear if there may be confounding factors such as residence with the partner, his education and occupation. From Table 5.1 65.5% of women reside with their husbands, with 20.2% of the husbands having attended primary education, 11.5% secondary and only 3.4% having attended higher education. There are 18.1% of women who do not know their husbands' educational history. This may reflect the level of illiteracy. With occupation, a majority, 49% of partners are in agricultural occupations, (59.5% when missing cases are excluded). Note that agricultural occupations in Nigeria are still rudimentary and do not necessarily yield much income.

A majority of women in Nigeria work either at home or outside the home. In the current sample 61.2% are working. Women work for various reasons and work may be an important component in utilization considering the financial capability and time to purchase care. Women's work may not afford them the time to attend clinics. It is common knowledge that patients, including pregnant women spend between one and six hours attending out-patient clinics in Nigeria. It, therefore, constitutes a major decision for women to forfeit the day's income for antenatal attendance. This would depend on the level of importance placed on antenatal care and the symptoms felt by women, especially as pregnancy is perceived to be a natural phenomenon rather than an illness. It is not clear if time constraints are

more evident with women who are self-employed or with employees in terms of patronage. In the NDHS sample 5.4% women are employees, 55.2% are self-employed while 0.5% are employers, (8.9%, 90.3% and 0.8% respectively when missing cases are excluded). Women's occupational patterns are similar to those of their partners but with more women being in sales and less in agriculture. Certainly, in southern Nigeria it is more likely for women to be involved in the foods sales and petty trading than men. It is not uncommon for the man to fish and ask his wife to sell the yield of the day. In the north, however, it is the men that sell in the markets because of the Islamic "purdah system" whereby women need escorts to go out and are restricted and confined to their homes. This factor affects utilization as women need male escorts to attend clinics.

#### 5.4.0 Pregnancy, birth and patronage details

Having looked at women's background and demographic characteristics, we examine their birth history and patronage patterns. Table 5.2 shows birth and pregnancy details on the 8781 (weighted figure) women interviewed.

Table 5.2 Percentage distribution of birth and pregnancy details in the 1990 NDHS data -(number 8781)

	Number	Percentage
Ever Given Birth		
Yes	6653	75.8
No	2128	24.2
Currently Pregnant		
Yes	971	11.1
No	7719	87.9
Unsure	79	0.9
Missing	12	0.1
Last birth in reference period (1985-1990)		
Yes	1651	24.8
No	5003	75.2

Table 5.2 above, indicates that 75.8% of the women have given birth, while only 11.1% of the women were pregnant at the time of the survey. 1% of the women were either unsure

or did not respond to the question while only 24.8% of the respondents had their last births in the reference period. This figure seems low given women in Nigeria are less likely to use family planning to space the births of their children and have a high fertility rate but it is important to remember that it only relates to last births. Some women's last births occurred as far back as 1961, so the decision was made, to only run further analysis of last births within the 5 year reference period of 1985-1990. One of the advantages of this decision is the accuracy of recall and recency of the patterns that occur.

The 1987 ODHS only recorded the most qualified person seen for antenatal care which may have excluded the existence of dual utilization. The 1990 NDHS improved on that omission by recording all persons seen in a pregnancy. This gives a clearer indication of women's patronage patterns. The antenatal patronage pattern exhibited in the current pregnancy (Table 5.3, below) is very similar to the national pattern (Table 5.4, below) in the reference period. It establishes the existence of dual utilization. 54.9% of currently pregnant women do not use any antenatal services while the highest patronage goes to the hospital (38.6%) among those who use services. TBAs and the other category take up 2.7% and 2.1% of services respectively while 1.7% went to dual utilization. Further analysis will be limited to last pregnancy and birth, rather than all births in the five year period.

Table 5.3 Percentage distribution of type of antenatal service utilized by women in current pregnancy in the 1990 NDHS.

Service Used	Number	Percentage
Hospital Only	375	38.6
Traditional Birth Attendant Only	26	2.7
Others Only	20	2.1
Hospital and TBA Only	8	0.8
TBA\Others Only	2	0.2
Hospital and Other Only	7	0.7
No One	533	54.9
Total	971	100.0

(Others Only category comprises of village H.worker, relatives & friends)

Table 5.4 Percentage distribution of antenatal service utilized by women in their last birth in the 1990 NDHS data.

Service Used	Number	Percentage
Hospital Only	965	58.4
TBA Only	82	5.0
Dual Utilizers	20	1.2
None*	585	35.4
Total	1651	100.0

\* The 'None' category comprises of non users, and those who use village health workers, relatives, mission and friends

Table 5.4 exhibits the national pattern of antenatal service utilization in women's last birth in favour of trained medical personnel (doctor or nurse/midwife) at 58.4%, only 5.0% use the services of the TBAs and 1.2% are dual utilizers. The none category comprises of services of village health workers, non users, relatives and friends who are not necessarily trained to provide antenatal care. Thus 40.4% of the women do not use services provided by qualified personnel in their last pregnancy. Antenatal patronage in the five year period showed similar patterns. The level of patronage is higher for all categories in the last birth than in current pregnancy. It may be speculated that women had more time to attend services in their last birth than in current pregnancy.

The patronage patterns exhibited are far below the findings of Adekunle *et al.* (1990) in the ODHS data with 81% of women having professional checks for their pregnancies. Note that the ODHS data recorded the most qualified personnel. The figure is also below the finding of Alabi (1990) which suggests that 90% patronage goes to TBAs. It also differs from the figures of 35% patronage attributed to TBAs in Africa as suggested by WHO (1985). However, this figure represents only antenatal care and many women may not have gone for it because they do not feel ill and may not view antenatal care as a necessary component in pregnancy. The other issue may be that other studies not have restricted TBA service to obstetric services alone. TBAs have other

roles such as orthopaedic (bone structuring) and healing of other ailments for which they are patronized. It may, thus, be necessary to look at the distribution for delivery before making any conclusions. The non-utilization group identified agrees with Ademuwagun's (1974) suggestion that there existed a "self-help" group in medical service utilization in Nigeria. Before looking at births we examine any relationship that may exist between use of these services and background characteristics. The interest in this research is on TBA and hospital utilization patterns, therefore further analysis will exclude the 'other' and 'missing' categories and be limited to hospital, TBA and dual utilization (a combination of hospital and TBA services).

Table 5.5 Percentage distribution\* of women's background characteristics by antenatal care utilization in their last birth in the 1990 NDHS data.

Characteristic	Hospital Only	TBA Only	Dual	Number (Likelihood Ratio test)	p-value
<b>Age</b>					.10
15-19	90.1	9.2	0.7	183	
20-24	89.8	8.0	2.2	497	
25-29	89.6	8.0	2.4	302	
30-34	98.0	2.0	-	68	
35-49	100.0	-	-	15	
<b>Education</b>					.00
None	86.2	12.7	1.1	370	
Primary	89.5	8.3	2.2	344	
Secondary	95.6	2.0	2.3	325	
Higher	100.0	-	-	27	
<b>Partner's Education</b>					.00
None	86.9	11.9	1.3	327	
Primary	88.2	9.4	2.5	282	
Secondary	93.5	4.3	2.2	333	
Higher	99.3	-	0.7	81	
<b>Residence</b>					.00
Urban	95.7	1.6	2.7	340	
Rural	88.0	10.6	1.4	726	
<b>Childhood residence</b>					.00
City	94.4	2.8	2.8	137	
Town	94.4	2.9	2.7	281	
Rural	87.9	10.8	1.3	648	
<b>Electricity</b>					.00
Yes	93.5	4.6	1.9	665	
No	85.4	12.9	1.6	401	
<b>Owns Television</b>					.00
Yes	95.7	1.1	3.2	260	
No	88.8	9.8	1.4	807	
<b>Watches T.V. Weekly</b>					.00
Yes	94.9	2.1	3.1	341	
No	88.4	10.4	1.3	724	
<b>Owns Radio</b>					.00
Yes	93.5	4.6	1.9	665	
No	85.4	12.9	1.6	401	
<b>Uses Radio Weekly</b>					.00
Yes	93.1	4.8	2.2	653	
No	86.3	12.4	1.3	414	

Table 5.5 is continued on the next page.

Table 5.5 contd. Percentage distribution\* of women's background characteristics by antenatal care utilization in their last birth in the 1990 NDHS data.

Characteristic	Hospital Only	TBA Only	Dual	Number (Likelihood Ratio test)	p-value
<b>Marital status</b>					.65
Married	90.2	7.9	1.9	917	
Cohabiting	93.0	6.3	0.8	82	
Widowed	100.0	-	-	6	
Divorced	74.3	20.7	5.0	12	
Separated	87.8	12.2	-	19	
<b>Lives with Partner</b>					.02
Yes	91.3	7.0	1.7	805	
No	82.2	13.7	4.1	109	
<b>Religion</b>					.00
Protestant	89.9	8.3	1.8	401	
Catholic	92.9	5.3	1.8	178	
Islam	91.6	6.4	2.0	453	
Trad. Rel.	70.8	29.2	-	24	
No Religion	59.6	40.4	-	9	
<b>Currently Working</b>					.71
Yes	90.9	7.4	1.6	726	
No	89.5	8.3	2.2	292	
<b>Kind of Worker</b>					.61
Employee	94.7	4.6	0.7	75	
Self-Employed	90.4	7.8	1.8	646	
Employer	100.0	-	-	5	
<b>Occupation</b>					.18
Other Answers	100.0	-	-	0	
Agr/Fst/Fish	89.2	10.2	0.7	313	
Prof,Tec	98.6	1.0	0.4	53	
Admin/Mgt	100.0	-	-	4	
Clerical	100.0	-	-	6	
Sales Workers	90.5	6.5	2.9	286	
Production	92.3	-	7.7	9	
Service	93.4	5.4	1.1	55	
<b>Partner's Occupation</b>					.13
Other Answers	94.4	5.6	-	9	
Agr/Fst/Fish	88.4	10.6	0.9	447	
Prof/Tec	92.2	5.8	1.9	157	
Admin/Mgt	94.8	-	5.2	15	
Clerical	95.2	-	4.8	32	
Sales Workers	89.2	6.9	3.9	131	
Production	92.0	4.2	3.8	42	
Service	93.3	5.2	1.5	179	
Student/applt	85.3	14.7	-	15	
Don't Know	100.0	-	-	1	

\*(Percentages may not add to 100% due to rounding).



An appropriate test of association between the dependent variable and the various characteristics of the respondent is the likelihood ratio test. This test is given by

$$L^2 = 2 \sum O \log\left(\frac{O}{E}\right)$$

where  $O$  = observed count and  $E$  = expected count. There is a statistically significant association when the p-value is less than our critical value. For the purpose of these analysis we adopt a 5% significance test, hence we compare the p-values to 0.05.

Testing at the 5% significance level, it would seem that antenatal care is strongly associated with most of the various characteristics. Age, marital status, currently working and kind of worker of the woman is, (i.e. whether employee or self-employed), occupation of respondent and partner do not seem to be important while education, residence, residence with partner, radio and TV ownership and use, and access to electricity seem important.

With education, all types of patronage are present to all groups except women with higher education who only use hospitals. This is surprising as it is common knowledge that highly educated women do patronize TBAs. During the in-depth study for instance, a Phd graduate of biology and a nurse; both with the history of previous cesarean section died at TBA residences while trying to have normal deliveries. Thus, the non usage may have occurred due to the small number of women in this category. However, some women whose partners have higher education practice dual utilization, but were not solely dependent on TBAs. This may be the case because men with higher education may have married women with lower educational attainment and may not have participated in their choice of utilization.

It is expected that environment would influence patronage pattern. There are, for example, more TBAs in rural areas than there are in urban areas consequently a woman resident in a rural area is more likely to use TBA services than her urban counterpart. Similarly, a woman raised in a rural environment would be more conditioned to trust and use TBA services. From Table 5.5 urban women used hospital services more than rural women, (95.7% versus 88.0%) but rural women used TBAs services more than their urban counterparts (10.6% versus 1.6%). Urban women seem to practice dual utilization more than rural women. This may reflect the fact that women value TBA services and no one practice has all the answers to women's needs, for example massage is only provided by TBAs. For women in rural areas, dual utilization could be reduced due to lack of accessibility and long travel time and effort. The pattern for childhood residence is similar. Women who own and or watch T.V. weekly use hospital services more than those who do not. Sole dependence on TBA service is practised nearly 6 times more by those who do not watch T.V. than those who do. Dual utilization is practised by both categories but more by those who own or watch T.V. Thus exposure to T.V. may encourage women to combine TBA care with that of the hospital rather than being just TBA dependent. Ownership of radio and weekly use also reflects high use of hospital at 93.5% and 93.1% respectively while sole dependence on TBA is at 4.6% and 4.8%. Public enlightenment programmes are featured regularly on T.V and radio programmes and may be responsible. It could also reflect the ability to pay for services by people who own radios or T.V sets.

Differentials in utilization by religion occurred. There is a generally high patronage of hospital services by both Christian and Moslem women. There is much less use from women in 'traditional religion' and 'no religion' respectively. Women with traditional or no belief system do not practice dual utilization and have the highest patronage

of sole dependence on TBA services. TBA services have links with traditional beliefs and history thus it is not surprising that this is the case.

Table 5.6 Given tetanus injection in last pregnancy

Given TTI	Number	Percentage incl.missing	Percentage excl. missing
Yes	952	57.7	57.7
No	695	42.1	42.1
DK	2	0.1	0.1
Missing	2	0.1	-
Total	1651	100.0	99.9

(\*Percentage may not add up to 100% due to rounding).

#### 5.4.1 Uptake of Tetanus Toxoid Injection (TTI) in Pregnancy

Before looking at assistance at delivery it is necessary to examine uptake of tetanus toxoid injection (TTI). This is one of the factors examined in the Adekunle *et al.* (1990) study of the 1987 ODHS data. TTI is an injection recommended to be taken by the medical profession in every pregnancy, to protect both the unborn child and mother from infection, and so it is considered essential. Table 5.6 above, indicates that 57.7% of the respondents received TTI in their last birth in the reference period while Table 5.7 below, shows the uptake of TTI by various background characteristics. With TTI all the variables except marital status and occupation being significant based on a likelihood ratio test of homogeneity at a 5% level of significance. Women between ages 20 and 29 have a higher TTI in their last birth in the survey. The least uptake occurred in age groups 15-19 and 35-49 at 43.5% and 42% respectively. About 0.4% of the respondents could not remember if they had TTI in their last birth. On the whole it appears that women either do not realize the importance of the TTI or are simply negligent in taking it in pregnancy.

The uptake of TTI increased with exposure to education with the least uptake by 39.6% of women with no education, with

double the uptake for those with secondary education, but there was a slight drop for women in higher education. This may be due to the small numbers involved. (Small numbers do not allow the variations to be apparent; similar to sample sizes and representation). A similar pattern emerged when uptake was compared with partners' educational attainment. The difference being that women having partners with higher education have the highest uptake than all other categories.

An examination of current residence indicates more uptake for women who resided in urban areas (81.1%) than those in rural areas (50.9%). For childhood residence women who grew up in either a city or town had higher uptake (77.3% and 71.6%) compared to women who grew in rural areas having an uptake of 51.3%. Women who owned T.V. and those who watched weekly T.V. have about twice the uptake of TTI than those who do not. Ownership and exposure to weekly radio programmes also indicates higher uptake of TTI at 63.3% and 65% respectively.

Catholic and Protestant women have higher uptake of TTI than Moslem and other women. The highest level of non use is among women with no religion, Islam and traditional religion. There is also an indication of a higher uptake of TTI by women who are not resident with their partners. Working women have a higher uptake than non working women (66.5% versus 45.6%). Employers have the highest uptake at 100.0%, (note small numbers; which could also indicate that the result may be due to chance), while self-employed women have the least uptake at 64.9%. When type of occupation is observed, women in administration also have the highest uptake (100.0%) while the least uptake is by women in production at 53.1%. When compared with partners' occupations similar trends are observed with the exception that the least uptake clearly stands out from women whose partners are in agricultural occupations (45.5%).

Table 5.7 Percentage distribution of women's background characteristics by receipt of tetanus toxoid in their last birth in the 1990 NDHS data.

Characteristic	Receipt Of Tetanus Toxoid Injection			Total	P- Value
	Yes	No	Don't Kn		
Age					.00
15-19	43.5	56.5	-	366	
20-24	60.3	39.5	0.2	747	
25-29	69.5	30.4	0.2	397	
30-34	49.4	50.6	-	111	
35-49	42.0	58.0	-	29	
<b>Education</b>					.00
None	39.6	60.3	0.1	816	
Primary	69.2	30.6	0.2	457	
Secondary	83.9	15.9	0.1	349	
Higher	73.3	26.7	-	27	
<b>Partner's Education</b>					.00
None	40.4	59.5	0.1	741	
Primary	65.3	34.4	0.3	378	
Secondary	76.2	23.7	0.1	389	
Higher	80.9	19.1	-	85	
<b>Residence</b>					.00
Urban	81.1	18.6	0.3	374	
Rural	50.9	49.9	0.1	1276	
<b>Childhood residence</b>					.00
City	77.3	22.0	0.8	150	
Town	71.6	28.4	-	330	
Rural	51.3	48.6	0.1	1169	
<b>Electricity</b>					.00
Yes	80.5	19.2	0.3	393	
No	50.6	49.3	0.1	1257	
<b>Owns Television</b>					.00
Yes	80.2	19.6	0.2	283	
No	53.1	46.7	0.1	1365	
<b>Watches T.V. Weekly</b>					.00
Yes	81.9	17.9	0.2	377	
No	50.6	49.3	0.1	1269	
<b>Owns Radio</b>					.00
Yes	63.3	36.5	0.1	928	
No	50.6	49.2	0.2	720	
<b>Uses Radio Weekly</b>					.00
Yes	65.0	34.8	0.2	900	
No	49.1	50.8	0.1	746	
<b>Marital status</b>					.85
Married	58.1	41.7	0.2	1421	
Cohabiting	50.1	49.9	-	138	
Widowed	57.7	42.3	-	10	
Divorced	62.1	37.9	-	17	
Separated	58.6	41.4	-	23	
<b>Lives with Partner</b>					.00
Yes	56.5	43.3	0.2	1293	
No	74.3	25.7	-	124	
<b>Religion</b>					.00
Protestant	71.2	28.7	0.1	484	
Catholic	77.3	22.7	-	208	
Islam	46.2	53.6	0.2	891	
Trad Rel	62.9	37.1	-	39	
No Religion	36.8	63.2	-	24	
<b>Currently Working</b>					.00
Yes	66.5	33.3	0.2	959	
No	45.6	54.3	0.1	691	
<b>Kind of Worker</b>					.00
Employee	82.4	17.6	-	79	
Self	64.9	34.9	0.2	874	
Emplyr	100.0	-	-	5	

\*(table 5.7 continued on the next page).

Table 5.7 Percentage distribution of women's background characteristics by receipt of tetanus toxoid in their last birth in the 1990 NDHS data (table 5.7 continued from the previous page).

Characteristic Receipt Of Tetanus Toxoid Injection					P- Value
<b>Occupation</b>	Yes	No	Don't Kn	Total	.28
Other Ans	100.0	-	-	1	
Agr/Fst/Fish	68.7	31.3	-	393	
Prof Tec	79.3	20.7	-	56	
Admin/Mgt	100.0	-	-	4	
Clerical	60.6	39.4	-	6	
Sales Workers	62.6	37.2	0.3	418	
Production	53.1	46.9	-	15	
Service	70.4	28.8	0.8	65	
Don't Know	-	100.0	-	1	
<b>Partner's Occupation</b>					.00
Other Ans	71.4	28.6	-	11	
Agr/Fst/Fish	45.5	54.4	0.1	869	
Prof/Tec	79.0	20.8	0.2	188	
Admin Mgt	65.7	34.3	-	15	
Clerical	83.9	16.1	-	34	
Sales Workers	60.9	38.8	0.3	186	
Production	72.0	28.0	-	48	
Service Wrkrs	73.5	26.2	0.3	226	
Student/Apt	66.5	33.5	-	17	
Don't Know	100.0	-	-	1	

\*(percentages may not add up to 100% due to rounding)  
 (P- value refers to Likelihood Ratio test)

Table 5.8 Percentage distribution of type of assistance at delivery in last birth in the 1990 NDHS data.

Service Used	Number	Percentage incl. Missing	Percentage Excl. Missing Nos.
Hospital	496	30.0	38.6
TBA	371	22.5	28.9
Others	104	6.3	8.1
Self	313	18.9	24.4
Missing	367	22.2	
<b>Total</b>	<b>1651</b>	<b>100.0</b>	<b>100.0</b>

(the other category comprises of auxiliary nurses, village health worker, relatives, mission and friends)

\*(percentages may not add up to 100% due to rounding)

Table 5.9 Percentage distribution of type of assistance at delivery in last birth in the 1990 NDHS data by women's background Characteristics.

Charac	Hosp	TBA	Other	Self	No.	P-Value
<b>Age</b>						.00
15-19	28.4	34.4	7.6	29.6	294	
20-24	37.3	30.0	8.4	24.3	574	
25-29	49.9	20.5	10.0	19.6	315	
30-34	42.4	29.0	2.1	26.6	79	
35-49	35.7	45.5	3.5	15.3	22	
<b>Education</b>						.00
None	12.7	38.1	8.2	41.0	589	
Primary	46.4	27.2	9.6	16.8	361	
Sec	74.8	15.5	6.8	2.8	309	
Higher	90.3	1.2	1.8	6.8	25	
<b>Partner's Education</b>						.00
None	13.0	35.7	8.8	42.4	554	
Primary	49.4	29.0	8.2	13.4	303	
Sec	61.6	21.6	6.6	10.2	306	
Higher	69.1	15.1	9.2	6.6	76	
<b>Residence</b>						.00
Urban	72.2	11.7	6.6	9.4	322	
Rural	27.3	34.7	8.6	29.4	961	
<b>Childhood residence</b>						.00
City	79.5	10.3	2.1	8.1	131	
Town	62.3	14.2	6.9	16.6	273	
Rural	25.3	36.1	9.4	29.2	880	
<b>Electricity</b>						.00
Yes	74.9	11.3	5.0	8.0	343	
No	25.4	35.3	9.0	30.3	941	
<b>Owns Television</b>						.00
Yes	76.3	9.1	5.9	8.7	247	
No	29.7	33.6	8.7	28.1	1037	
<b>Watches T.V. Weekly</b>						.00
Yes	75.5	11.3	7.1	6.2	328	
No	26.1	34.7	8.5	30.7	953	
<b>Owns Radio</b>						.00
Yes	48.2	23.3	7.8	20.7	755	
No	24.9	36.8	8.6	29.6	529	
<b>Uses Radio Weekly</b>						.00
Yes	48.8	26.4	6.9	17.9	736	
No	25.1	32.0	9.8	33.1	547	
<b>Marital status</b>						.00
Married	37.1	29.5	8.6	24.9	1090	
Cohabit	38.3	24.6	3.9	33.2	119	
Widowed	37.1	50.2	12.7	-	7	
Divorced	60.4	39.6	-	-	-	12
Sep	56.0	24.0	11.8	8.2	22	
<b>Lives with Partner</b>						.00
Yes	34.8	29.4	8.9	26.8	983	
No	56.7	30.7	5.2	7.3	103	

\*(table 5.9 continued on the next page).

Table 5.9 Percentage distribution of type of assistance at delivery in last birth in the 1990 NDHS data by women's background Characteristics continued from the previous page.

Characteristic	hosp	TBA	Other	Self	Total	P-Value
<b>Religion</b>						.00
Protes	63.2	24.3	7.4	5.1	416	
Catholic	63.2	25.7	8.3	2.8	169	
Islam	17.7	31.6	7.0	43.7	649	
Trad Rel	22.7	45.3	28.7	3.3	32	
No Rel	21.4	33.3	31.9	13.4	16	
<b>Currently Working</b>						.00
Yes	44.7	27.5	9.4	18.4	737	
No	30.5	30.7	6.4	32.4	547	
<b>Kind of Worker</b>						.00
Employee	78.6	14.1	4.0	3.3	71	
Self-Emp	40.7	29.2	10.0	20.1	661	
Employer	85.6	-	14.4	-	4	
<b>Occupation</b>						.00
Others	100.0	-	-	-	-	
Agr/Frst	32.8	38.5	13.4	15.3	242	
Prof/Tec	81.1	4.8	9.2	4.9	49	
Admn/Mgt	100.0	-	-	-	3	
Clerical	92.5	5.2	2.3	-	6	
Sales	44.3	26.1	7.2	22.4	364	
Prodn	29.3	25.1	14.3	31.4	12	
Service	61.0	15.5	7.4	16.2	60	
Don't Kn	-	-	-	100.0	1	
<b>Partner's Occupation</b>						.00
Others	60.7	25.9	-	13.4	9	
Agr/Frst	15.5	37.0	9.4	38.2	607	
Prof/Tec	66.2	18.4	6.2	9.1	168	
Admn/Mgt	72.6	20.4	-	7.0	15	
Clerical	76.7	7.8	3.3	12.2	30	
Sales	44.8	27.7	7.2	20.2	164	
Prodn	75.4	11.7	5.4	7.6	41	
Service	59.5	21.1	9.2	10.1	189	
Student	34.8	32.6	7.0	25.6	12	
Don't Kn	100.0	-	-	-	1	

\*(percentages may not add up to 100% due to rounding)

\*(P-value refers to likelihood ratio)

#### 5.4.2 Delivery Patronage Patterns in the 1990 NDHS data

In Table 5.8 above, if a woman is assisted by either a doctor or nurse/midwife then she is hospital assisted, if she is assisted by trained or untrained TBA then she is TBA assisted, if she is assisted outside these categories then she comes under the 'other' category, and if no one assisted her then she is self delivered. Table 5.8 indicates that 30% of women delivered in hospital at their last birth, while 22.5% with the TBA, Others 6.3% and Self 18.9%. As much as 22.2% are missing. The missing numbers are due to no responses, while the pattern of delivery place may be due to choice, accessibility or social networks; the reasons are ascertained in the in-depth and qualitative studies.



Assistance at delivery as re-classified is studied in Table 5.9 above.

From Table 5.9 all the various characteristics are significant at 5% level using the likelihood ratio test of homogeneity. A high percentage of women self delivered in all the age categories. Hospital deliveries vary by age with the least being in age groups 15-19 and 45-49. Women with no education have the highest self delivery rate at 41%, followed by those with primary education at 17.1%. Hospital assisted delivery is highest among women with higher education at 90.3%, but some women with higher education practised self delivery (6.8%), although note the small numbers involved. For both women and partners' educational level, hospital assisted delivery increased with education. Conversely TBA assisted delivery decreased with education. This seems to support the school of thought that TBA utilization would phase out with education (Harrison, 1985). The researcher was aware of two incidents of educated women who died in labour at two TBA residences during the in-depth study. The two TBAs were not part of this study and lived outside P.H. (one was in Lagos and the other in Aba; all were urban cities). One of the victims was personally known to the researcher and held a Phd degree in Biology and the other was a practising nurse in Orogbum health centre where some of the respondents were interviewed. It is not clear why both women decided to go well out of their immediate vicinity. However the similarity between the two cases was that they both had previous cesarian births and one of them had been ridiculed in a quarrel by another woman of not experiencing births per vagina. The myth on births per vagina has already been discussed in Chapter 2. Hospital services are more available in urban areas than rural, and more urban women (72.2%) have hospital delivery than their rural counterparts (27.3%). The converse pattern is evident for use of TBA, others and self deliveries; there are more women using them in the rural area than in the urban.

Women who watch T.V. use TBA services less (11.3%) than those who listen to radio (26.4%). Conversely, women who watch T.V. use hospital services more (75.5%) than women who listen to radio (48.8%). Women in agriculture, sales workers and production stand out as women least likely to use hospital services as are women married to men in these occupations except production. It appears that Christian women delivered more in hospital (63.2%) than their Moslem counterparts (17.7%). More working women (44.7%) use hospital services than unemployed women (30.5%). Similarly fewer women who live with their partners (34.8%) have hospital delivery than those who do not (56.7%).

#### **5.5.0 Rivers State utilization patterns**

The qualitative study is conducted in Rivers State, therefore, utilization patterns of Rivers State women in the 1990 NDHS data are of interest and are examined below. This is compared with the results of the qualitative data to examine similarities and differences. From Table 5.10 for those using antenatal services, it is indicative that hospital antenatal care, far exceeds patronage for TBA services at 49.6%, (76.4% if we exclude cases with missing values). However, a large percentage (30.0%) do not use any services and 5.1% of the respondents practice dual utilization. Table 5.11 indicates the opposite trend when it comes to delivery services. More women delivered at TBA residences than at the hospital at 50.5% and 33.3% respectively while 13.3% delivered themselves and 3.0% used other helpers. The implication of this is that over 60.0% of the sampled women do not deliver with trained medical personnel.

Table 5.10 Percentage distribution of antenatal service utilized by Rivers State women in their last birth in the 1990 NDHS data.

Service Used	Number including Missing.	Percentage	Percentage Excluding Missing Nos.
Hospital	20	49.6	76.4
TBA	6	15.3	18.5
Dual Utilizers	2	5.1	5.1
None/Missing	12	30.0	-
Total	40	100.0	100.0

\*(percentages may not add to 100 due to rounding)

Table 5.11 Percentage distribution of delivery by person assisting Rivers State women in their last birth in the 1990 NDHS data.

Service Used	Number including Missing.	Percentage Excl. Missing Nos.	Percentage
Hospital	13	33.3	31.6
TBA	20	50.5	60.7
Other Helpers	1	3.0	2.6
Self/Missing	5	13.3	-
Total	40	100.0	100.0

(the other category comprises of village health worker, relatives, mission and friends) \*(percentages may not add to 100 due to rounding)

The likelihood test of homogeneity is not carried out for Rivers State women due to small numbers.

### 5.6.0 Multivariate analysis

The multivariate analysis looks at the relationships between the response and explanatory variables simultaneously. The aim is to identify the determinants of health care utilization, while controlling for the effects of other potential determinants. Three indicators of health care measures are analyzed. These are antenatal care, assistance at delivery and uptake of tetanus injection. The exploratory analysis in the preceding section is important since it helps to identify variables which potentially influence the outcome variable. However, exploratory results should be used only as a starting point because some relationships become significant or insignificant only after the effect of others have been controlled for.

Multinomial logistic regression is used when the response variable is categorical with three or more categories. Such models can be regarded as extensions of the logistic regression model which is appropriate for a dichotomous response variable. Few statistical packages are able to fit a multinomial logistic model easily so in this research the Begg and Gray (1984) procedure is used. The procedure involves fitting individual logistic regression models and then using the parameter estimates as if they had been obtained from a multinomial logistic model. The Begg and Gray procedure is described in the next section.

Antenatal care has three categories so that two distinct logit models are needed for the Begg and Gray procedure. Delivery also has three categories so that two distinct logit models are needed for the Begg and Gray procedure.

For antenatal care, the two logistic models used are:

- 1) TBA versus hospital,
- 2) dual versus hospital and

and for assistance at delivery the models are:

- 1) TBA versus hospital and
- 2) Self versus hospital.

For a dichotomous response variable, there are two outcomes which may be denoted as 'failure' and 'success'. It is usual for the outcome denoted as a success to be given a code 1 and the other 0. If  $p$  is the probability of a success then  $1-p$  is the probability of a failure so that the ratio of the two probabilities is the odds of success i.e. the odds of a 'success'.

$$\frac{p}{1-p}$$

Logistic regression involves modelling the log odds of a 'success' as a linear function of the explanatory variables

$$[X_1, X_2, \dots, X_k]$$

so that

$$\log\left(\frac{p}{1-p}\right) = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k$$

and

$$b_0, b_1, \dots, b_k$$

are parameters to be estimated.

With multinomial logistic regression, there may be 3 or more categories. For example, antenatal care has 3 outcomes: hospital, TBA and dual. We can let  $P_1$  be the probability that she uses hospital, let  $P_2$  be the probability that she uses TBA and let  $P_3$  be the probability that uses both, i.e. a dual utilizer. If hospital is chosen as a reference category, then there are two ratios of probabilities:

$$\frac{P_2}{P_1}$$

and

$$\frac{P_3}{P_1}$$

which are distinct so that the multinomial model involves estimating parameters for two simultaneous logit models. One for

$$\log\left(\frac{P_2}{P_1}\right)$$

and one for

$$\log\left(\frac{P_3}{P_1}\right)$$

The estimates for the model

$$\left(\log\left(\frac{P_2}{P_3}\right)\right)$$

can be obtained by subtraction from the other models.

#### 5.6.1 Begg and Gray Procedure:

Begg and Gray (1984) suggest the fitting of a series of binomial logistic regressions instead of a single multinomial logistic regression. This is done by selecting a single response category as the baseline category and studying the relationship of each of the other response categories to the baseline category using a series of binomial logistic models. That is, the logistic regression is performed for a subset of the data, i.e, the category of interest and the baseline category. The ensuing parameters from the binomial logistic models would then be used as though they had been estimated from a multinomial logistic model.

Begg and Gray (1984) confirmed that the maximum likelihood estimates from both methods are asymptotically unbiased although they have different variance-covariance matrices. It is also the case that parameter estimates from the separate individualized binomial logistic models are not

independent because the baseline response cases are common to all of them. Thus the odds ratios based on these estimates should be treated with care. Another problem is the confidence intervals for the predicted probabilities or joint tests of parameters from different regressions require extra computation, but any significant test involving a single parameter will be unbiased.

The asymptotic relative efficiency of the individualized parameter estimates (compared to the estimates from the multinomial logistic models) seem high and the principal influence on efficiency seem to be the size of the baseline category. In this research, effort is therefore, made to ensure that the prevalence of the baseline response is large in comparison with the other categories.

The Statistical Package for Social Sciences (SPSS) is the statistical package chosen for the analysis of these results for reasons of availability, efficiency and ease in meeting the required analytical procedures without further calculation. If the estimate is positive it indicates a MORE likely usage. If the estimate is negative, then it is a LESS likely usage. The variable and value labels which are printed out by SPSS are replaced with the original names of variables and categories respectively. This is done for every table. The order of the variables in the table are also changed so that they are not the same as in the SPSS results. This is because the variables that are, or have similar themes, should be put close together. For instance, current place of residence and childhood place of residence are placed one after the other. The results are not usually presented for the baseline category so the estimate for the base category is always 0.00 while the odds is always 1.00.

A significant category is simply identified by examining the 'Sig' column in the SPSS results. If the figure there is 0.05 or less, then the category is significant. From the

multivariate results presented, another way identifying significant relationships is when the standard error is at least twice the amount of the estimate. These are variable rather than category results.

#### **5.6.2 Parameter Interpretation**

For logistic regression, the exponentiation of the parameter estimates can be interpreted as odds ratios. For example, for a logistic regression of hospital vs TBA antenatal care where the parameter estimates for level of education of respondent is 0 for 'none' 0.6 for 'primary' and 1.2 for secondary then the odds ratio would be 1.00 for 'none', 1.82 (exp of 0.6) for primary and 3.32 for secondary. This would imply that the odds of using the hospital for antenatal care as opposed to using a TBA are more than three times as high for women with secondary education compared to women with no education. Alternatively, it can be deduced that the odds of using the hospital are 232% higher for women with secondary education compared to those with no education.

#### **5.7.0 Multivariate Results on Antenatal Care**

Antenatal results are interpreted by comparing the change in odds of using TBA versus hospital, dual versus hospital and dual versus TBA services.



Table 5.12 Antenatal Care - TBA versus Hospital-1990 NDHS data

Parameter	Estimates	Standard Error	Odds
<b>RESPONDENT'S EDUCATIONAL LEVEL:</b>			
Primary	0.00	-	1.00
Secondary/higher	-1.3709	.4553	.2539
None	.8583	.3091	2.3592
<b>CURRENT PLACE OF RESIDENCE</b>			
Urban	0.00	-	1.00
Rural	1.2629	.4665	3.5355
<b>HAS RADIO</b>			
Yes	0.00	-	1.00
No	.6158	.2554	1.8512
<b>Husband lives with/away</b>			
Husband present	0.00	-	1.00
Husband away	1.1376	.3597	3.1193
Other	.1006	.3905	1.1059
<b>RELIGION</b>			
Christianity	0.00	-	1.00
Islam	-.8268	.3119	.4375
Traditional/no religion	1.1514	.4500	3.1628
CONSTANT	-3.8560	-	

From Table 5.12 above, the significant variables include respondents education, current residence, radio ownership residence with husband and religion. It appears that if a woman has secondary or higher education, the odds of using TBA antenatal compared to hospital services is 75% lower than those with primary education. Note that secondary and higher education were combined because of the small number for higher education respondents. The number of respondents in this analysis is 983. The odds of using TBA antenatal services are 136% higher for women with no education compared to women with primary education. These results seem to confirm the theories that affirm the positive influence of education on modern hospital utilization.

The odds of Moslems using TBA services are 56% lower than Christians. The odds of using TBA services for women without any religion or in traditional religion are 216% higher compared to Christians.

The odds of using TBA services for antenatal care by women currently resident in rural areas are 254% higher than women

in urban residence. The odds of using TBA for antenatal care are 212% higher by women not resident with their husbands than those whose husbands are resident. The odds of using TBAs for antenatal care by women in other categories such as divorced, widowed or separated were 11% higher than women who have their husbands resident. The presence of a husband in a relationship seem to have a negative effect on TBA service utilization.

The odds of using TBAs for antenatal care by women who do not own radio sets are 85% higher than women who own radio sets.

When a logistic analysis was done on hospital versus dual utilization none of the variables were significant and only 581 cases were used in the analysis. A stepwise analysis produced no change in the results and none of the variables were included in the equation.

Similarly when dual usage is compared to TBA utilization in antenatal care only electricity was found significant. The odds of using TBAs for antenatal care was 96% lower by women with no access to electricity than those who do. This may seem surprising as electricity is more likely to be available in cities as would be the possibility of practising dual utilization. However, it is common knowledge that women travel long distances to access service if they consider it important or if they are in curative circumstances.

Table 5.13 Antenatal Care - Dual versus TBA- 1990 NDHS data

Parameter	Estimates	Standard Error	Odds
<b>ELECTRICITY:</b>			
Yes	0.00	-	1.00
No	-2.8159	.6211	.0598
<b>CONSTANT</b>	.6012	-	

Significant at 5%

### 5.7.1 Multivariate Results on Delivery Care:

Below (Table 5.14), are the multivariate results on delivery care. The comparisons are between TBA, hospital and Self delivery. For delivery, when the use of TBA is compared to hospital, the following variables were significant: respondent's education, radio ownership, TV weekly use, religion, current residence and childhood residence. It is indicated from Table 5.14 that the odds of a TBA delivery for women with secondary or higher education are 30% lower than women with primary education. The odds of a TBA delivery for women without any education are 81% higher than women with primary education. This result is similar to the suggestions of (Harrison 1985; Caldwell 1979; Caldwell *et al.* 1980) on the positive influence of education on use of modern maternal services.

The odds of women resident in rural areas having a TBA delivery are 202% higher than women currently in urban areas. Women who grew up in a town or rural village have a 107% and 349% higher odds of a TBA delivery to hospital than women who grew up in the city. This may have been compounded by accessibility as opposed to trust and conditioning to use TBA services. The odds of Moslem women having TBA delivery were 340% times higher than Christians. The odds of having TBA delivery for women with traditional religion and no religion are 170% higher compared to Christian women. The odds of having TBA delivery for women who do not watch TV weekly to hospital are 104% higher than women who do.

Table 5.14 Delivery Care - TBA versus Hospital- 1990 NDHS data

Parameter	Estimates	Standard Error	Odds
<b>RESPONDENT'S EDUCATIONAL LEVEL:</b>			
Primary	0.00	-	1.00
Secondary/higher	-.3552	.2314	.7011
None	.5951	.2371	1.8132
<b>CURRENT PLACE OF RESIDENCE</b>			
Urban	0.00	-	1.00
Rural	1.1043	.2699	3.0170
<b>HAS RADIO</b>			
Yes	0.00	-	1.00
No	.6552	.1862	1.9256
<b>CHILDHOOD PLACE OF RESIDENCE</b>			
City	0.00	-	1.00
Town	.7317	.3780	2.0787
Rural	1.5034	.3565	4.4970
<b>WATCHES TV AT LEAST ONCE A WEEK</b>			
Yes	0.00	-	1.00
No	.7129	.2541	2.0398
<b>RELIGION</b>			
Christianity	0.00	-	1.00
Islam	1.4822	.2363	4.4028
Traditional/no religion	.9934	.4533	2.7003
CONSTANT	-3.7834	-	

When self delivery is compared with hospital (Table 5.15 below), 870 cases were used in the analysis and education, religion, childhood residence, current residence, radio ownership and weekly viewership of TV were found to be significant. The odds of having self delivery to hospital by women who do not have a radio or watch TV at least once a week are 62% and 297% higher than women who do respectively. The odds of self delivery were 42% lower for women with secondary or higher education than women with primary education. The odds of women with no education having self delivery were 126% higher than women with primary education.

The odds of Moslem women having self delivery were 3373% higher than Christian women. This is a very significant finding and is related to the constraints of Moslem women's mobility and the need to use male escorts. The other issue is the fact that a majority of gynaecologists are males; whereas Moslem women's preference and religious beliefs are centred on having female gynaecologists. This could be a

difficult issue for policy makers, unless special incentives could be provided to attract female doctors to specialize in obstetrics and gynaecology. Similarly the odds of having self delivery for women in traditional or without religion are 119% higher compared to Christian women.

The odds of having self delivery by women in rural residence are 436% higher than women in urban residence. This finding is associated to availability of and distance to services. The odds of having self delivery by a woman who grew up in rural or semi-urban area are 299% and 222% respectively than a woman who grew in the city. The latter finding is associated to experience and socialization.

Table 5.15 Delivery Care - Self versus Hospital- 1990 NDHS data

Parameter	Estimates	Standard Error	Odds
<b>RESPONDENT'S EDUCATIONAL LEVEL:</b>			
Primary	0.00	-	1.00
Secondary/higher	-.5460	.4069	.573
None	.8142	.2836	2.2573
<b>CURRENT PLACE OF RESIDENCE</b>			
Urban	0.00	-	1.00
Rural	1.6796	.3548	5.3635
<b>HAS RADIO</b>			
Yes	0.00	-	1.00
No	.4809	.2600	1.6176
<b>CHILDHOOD PLACE OF RESIDENCE</b>			
City	0.00	-	1.00
Town	1.1703	.5001	3.2231
Rural	1.3834	.4802	3.9884
<b>WATCHES TV AT LEAST ONCE A WEEK</b>			
Yes	0.00	-	1.00
No	1.3800	.3652	3.9748
<b>RELIGION</b>			
Christianity	0.00	-	1.00
Islam	3.5479	.3124	34.7389
Traditional/no religion	.7850	.7249	2.1925
CONSTANT	-6.5353	-	

Table 5.16 Delivery Care - Self versus TBA- 1990 NDHS data.

Parameter	Estimates	Standard Error	Odds
<b>RESPONDENT'S EDUCATIONAL LEVEL:</b>			
Primary	0.00	-	1.00
Secondary/higher	-1.0041	.4312	.3664
None	-.3465	.2411	.7072
<b>AGE GROUP</b>			
15 - 19	0.00	-	1.00
20 - 24	.4564	.2061	1.5784
25 - 29	.5319	.2563	1.7022
30 - 34	.4637	.3680	1.5899
35 - 39	-1.7666	1.3176	.1709
40 - 44	.3713	1.1004	1.4496
45 - 49	5.0662	17.0206	158.5653
<b>LISTENS TO RADIO AT LEAST ONCE A WEEK</b>			
Yes	0.00	-	1.00
No	.3726	.1739	1.4516
<b>HUSBAND LIVES WITH/AWAY</b>			
Husband present	0.00	-	1.00
Husband away	-.0175	.4781	.9826
Other	.5297	.2762	1.6984
<b>RELIGION</b>			
Christianity	0.00	-	1.00
Islam	2.2647	.2645	9.6281
Traditional/no religion	.1872	.6637	1.2058
CONSTANT	-2.1629	-	

From Table 5.16 above, while studying the relationship between TBA and Self delivery the number of cases included in the analysis was 619 and the significant variables include: respondent's education, radio usage, religion, residence with husband, and respondent's age. The odds of self delivery to TBA were 63% lower for women with secondary or higher education than women with primary education. The odds of women with no education having self delivery were 29% lower than women with primary education. The odds of having self delivery to TBA by women who do not listen to radio once a week are 45% higher than women who do.

The odds of Moslem women having self delivery to TBA were 862% higher than Christian women. This result further confirms our suggestion of mobility and constraints on outings on Moslem women when we observe the results of self versus hospital delivery. The odds of having self delivery for women in traditional or without religion are 20.0% higher compared to Christian women.

The odds of having a Self delivery to TBA are 2.0% lower by women not resident with their husbands than those whose husbands are resident. This is not significant and is attributed to chance and small numbers involved. The odds of having Self delivery by women in other categories such as divorced, widowed or separated were 70.0% higher than women whose husbands are resident.

The odds of having Self delivery to TBA by women in age group 20-24 were 58.0% higher than women in the 15-19 age group. The odds of having Self delivery are 70.0% higher by women in age group 25-29 than those in the 15-19 age group. The odds of having Self delivery are 59.0% higher by women in the 30 -34 group than the 15-19 age group but the odds of having Self delivery are lower by 83% by women in the 35-39 age group than the 15-19 age group. The odds of having Self delivery to TBA are highest in the 45-49 age group at 15756% than the 15-19 age group. Note that women in age group 45-49 have an outstanding likelihood of Self delivery due to small numbers. The reasons for these distributions are not clear. However, one suggestion could be the in-experience and lack of confidence of 15-19 year old as most of them are having their first babies and would need some assistance rather than self deliver.

#### **5.7.2 Multivariate Results on Uptake of Tetanus Injection:**

Below are the results on the uptake of TTI and the comparison is on 'Not given' and Given TTI.

Table 5.17 Not Given Tetanus Injection Versus Given Tetanus Injection

Parameter	Estimates	Standard Error	Odds
<b>AGE GROUP</b>			
15 - 19	0.00	-	1.00
20 - 24	-.6362	.1476	.5293
25 - 29	-1.0903	.1726	.3361
30 - 34	-.3660	.2473	.6935
35 - 39	-.7703	.4867	.4629
40 - 44	.3913	1.0638	1.4789
45 - 49	4.0366	9.1798	56.6347
<b>RESPONDENT'S LEVEL OF EDUCATION</b>			
Primary	0.00	-	1.00
Secondary/Higher	-.1768	.2006	.8380
None	.9102	.1493	2.4848
<b>HUSBAND'S LEVEL OF EDUCATION</b>			
Primary	0.00	-	1.00
Secondary/higher	-.3393	.1761	.7123
None	.4478	.1568	1.5649
<b>CURRENT PLACE OF RESIDENCE</b>			
Urban	0.00	-	1.00
Rural	.9484	.1652	2.5816
<b>HUSBAND LIVES WITH/AWAY</b>			
Husband present	0.00	-	1.00
Husband away	-.0918	.2375	.9123
Other	.5856	.1822	1.7960
<b>CONSTANT</b>	-1.1489	-	

From Table 5.17 the variables that are significant in the uptake of tetanus toxoid are age group, respondent's and her husband's education, residence with husband, current rural or urban residence. 1503 cases were included in the analysis. The odds of not having TTI to having TTI by women in age group 20-24 were 47.0% lower than women in the 15-19 age group. The odds of not having TTI are 66.0% lower by women in age group 25-29 than those in the 15-19 age group. The odds of not having TTI are 31% lower by women in the 30-34 group than the 15-19 age group but the odds of not having TTI are lower by 54% by women in the 35-39 age group than the 15-19 age group. The odds of not having TTI are 47.0% higher by women in the 40-44 group than the 15-19 age group. The odds of not having TTI to having TTI is highest in the 45-49 age group at 5353% than the 15-19 age group; which is due to chance. It is suggested that experience of previous births by older women encourages the uptake of TTI. This is also confirmed by TBAs who refer patients to



hospital for the benefits of TTI.

The odds of not having TTI are 17.0% lower for women with secondary or higher education than women with primary education. The odds of women with no education not having TTI is 148% higher than women with primary education. This might be the case in that educated women are more able to advocate for themselves as to what their needs are than their illiterate counterparts. The odds of not having TTI are 29% lower for women married to husbands with secondary or higher education than women whose husbands have only primary education. The odds of women whose husbands have with no education not having TTI is 56% higher than whose husbands have primary education.

The odds of not having TTI by women in rural residence are 158% higher than women in urban residence. The odds of not having TTI by women not resident with their husbands are 9% lower than women resident with their husbands. The odds of not having TTI by women who are either divorced, separated or widowed are 79% higher than women who are married.

#### **5.8.0 Summary**

The differences and similarities between Adekunle *et al.*'s (1990) study and this one have been identified both in the process used and findings. Both studies examined patterns of maternity care in Nigeria by analyzing DHS data. Adekunle *et al.*'s (1990) main objective being to identify patterns in the utilization of maternity care by maternal characteristics using the 1987 ODHS data. They used three principle variables which indicated utilization of maternity services; attendance for a pregnancy check-up by person seen, receipt of tetanus toxoid injection during pregnancy and assistance at delivery by type of person assisting. Their analysis included women who had at least one birth in the five year period before the DHS survey, resulting to 2155 women. The questions asked were relevant to each birth

irrespective of whether the child was alive or not. The second group of 406 women included in their study were those currently pregnant including 94 who had never given birth making the total to be (2155 + 94) 2249 women. They identified: maternity care patterns among women according to their most recent births in the last five years and care patterns among currently pregnant women.

Regarding findings from Adekunle *et al.*'s (1990) and this study: we compared the results from the variables; 'type of person seen for pregnancy check-up', 'type of assistant at delivery' and 'receipt of tetanus injection'. Their results indicated that 81% saw a doctor, nurse or midwife for antenatal care, leaving a discrepancy of 10% for women who received TTI, they speculate may be because of assistance sought for curative reasons. While 54% of deliveries were conducted by nurses or midwives, 34% of deliveries were conducted by relatives who may be classified as TBAs as they are untrained. Their study indicated a higher proportion of usage for professional assistance in prenatal care than delivery by 27%.

In this study (1990 NDHS data), focus and emphasis was laid on the last birth because frequency distributions looked similar with previous births and it would be easier to concentrate on one rather than all births. Last birth in the reference period was chosen because it is the most current birth and data for the last birth could be relied on more confidently. It appears from Table 5.3 that 54.9% of the women currently pregnant women do not use any antenatal services, while the highest patronage go to the hospital (38.6%) among those who use services. TBAs and the other category take up 2.7% and 2.1% of services respectively while 1.7% were dual utilizers. The figures for last pregnancy (Table 5.4) are slightly higher with hospital antenatal care at 58.4%, TBA 5.0%, dual utilization 1.2%, and no antenatal care at 35.4%. In this study 30% of women

deliver in hospital (that is, assisted either by doctor, nurse or midwife) at their last birth, while 22.5% by TBAs, 'Others' 6.3% and Self 18.9%. As much as 22.2% have missing data. The implication of this is that as much as 70% of women are not assisted by trained medical personnel for delivery. On the whole, the ODHS data reflects a higher patronage than the national data which may be confirming the regional differences in patronage patterns for the country. It is suggested that patronage for both antenatal care and delivery are higher in the southern states. A look at Tables 5.10 and 5.11 will reflect such differences in utilization for both antenatal care and delivery.

For TTI in the Adekunle *et al.* (1990) study they suggested an uptake of 71%. In this study the figure is lower with an uptake of TTI at 57.7% but almost tallies with the hospital antenatal care at 58.4% hospital patronage. However, hospital delivery in this study fell to 30% in the same last birth considered. It is therefore suggested that women have realized the importance of antenatal care and TTI to protect their pregnancies and take on these services in the hospital but maintain their choices of birth places either at home, TBAs or with other helpers.

In the multivariate analysis it appears that the probabilities of antenatal care is influenced by education, rural residence, residence with husband, religion and radio usage. Secondary or higher education has a positive effect on hospital antenatal care utilization. Conversely women without any education are most likely to use TBA antenatal care.

The effect of religion was more significant than expected both on antenatal and delivery services. Moslem women had 56% lower odds to use TBA services for antenatal care than Christian women. Moslem women also had 340% higher odds of TBA delivery compared to Christian women than hospital

delivery. They have 3373% higher odds of self delivery instead of hospital and 862% higher odds of self delivery instead of TBA delivery compared to Christian women. These effects are due to the restrictions of the 'Purdah' system on social mobility as well as the provision of obstetric services by male practitioners in hospitals. It is thus a policy issue which government and health practitioners need to recognise.

Another surprise is the effect of husbands on the utilization of services. The presence of a husband has a negative effect on the uptake of TBA antenatal services. The absence of a husband whether (by not being resident, divorced, separated or widowed) has a contrary effect. However, the effect is not seen in choice of delivery care. This is further investigated in the in-depth study. This finding may be followed up by suggesting to policy makers to encourage husbands to attend antenatal classes; a practice which is not currently pursued in Port-Harcourt and is forbidden by TBAs.

Current residence also has effects on utilization of services with urban favouring hospital services and rural, TBA services. Rural residence also favours self delivery. This finding can be associated to the hypotheses of availability and accessibility discussed in Chapter 2.

The uptake of TTI is in favour of the hospital if women are educated or married to men educated to at least secondary level, have access to radio, TV and live in the city. Younger women are more likely to have TTI than older women.

The anticipated effects of distance, cost, age, cultural beliefs, surgical intervention, previous experience, work or employment as stated in the hypotheses are absent in both studies and so would be investigated in the in-depth and follow-up studies.

The major differences between this study and that of Adekunle *et. al* (1990) are:

1. Adekunle suggests a higher uptake of hospital antenatal care at 81% while this study notes a national figure of 58.4% hospital antenatal care.
2. This study identifies the existence of dual utilization at a 1.5% national figure which is absent in the Adekunle study. This discovery is further investigated in an in-depth study.
3. Adekunle records 34% relatives' assistance at delivery while this study observes 5.0% TBA delivery and specifies self delivery at 18.0%, other delivery types at 6.3%; which are absent in the Adekunle study.
4. Adekunle records a 54.0% hospital delivery but we note a 30% delivery for last birth in reference period.
5. Both studies acknowledge the positive effect of education on the uptake of obstetric services.

## Chapter 6

### The 1991 Port-Harcourt In-depth Study

#### 6.0 Introduction

In Chapter 4 details of questionnaire design, data collection and difficulties experienced in this study were highlighted. In Chapter 5 the 1990 Nigeria Demographic and Health Survey (NDHS) was analyzed in order to study the national pattern of obstetric behaviour. Out of the sample of 8781 women in the NDHS, 6653 (75.8%) had given birth before and 971 (11.1%) were currently pregnant at the time of the survey. When the last birth in the five years prior to the survey was considered, about 5% received antenatal care from TBAs and 58.4% from the hospital. As much as 35.4% of these births did not receive any antenatal care. These figures represent the national picture, and out of the 1651 responding to these questions, 1.2% were dual utilizers.

When utilization of delivery services for the last birth in the five-year period was considered, the TBA had an overall patronage of 22.5% while qualified medical personnel had 30% of all deliveries and 6.3% went to others. As many as 18.9% of women delivered themselves, and 22.2% had missing data.

When utilization was observed in Rivers State from the NDHS, out of 184 women interviewed, 40 had their last birth in the reference period. Of these, 49.4% utilized antenatal care from trained medical personnel while 15.3% sought care from TBAs, 5.1% were dual utilizers and as much as 30% either did not receive any antenatal care or had missing data. In other words, for the whole of Rivers State 50.6% did not receive antenatal care from trained personnel. For delivery, trained medics conducted 33.3% of deliveries of the last birth in the five year period, while TBAs conducted 50.5% of deliveries and the 'other' category conducted 3.0% and 13.3% self-delivered. This means that untrained personnel conduct 66.7% of all births. Urban figures were too small to analyze

separately.

In this chapter the 1991 in-depth interviews of 700 women in Port-Harcourt (PH) are analyzed and compared with the 1990 NDHS data. Port-Harcourt is particularly endowed with hospitals and a host of well-equipped private clinics by virtue of its economic position. It hosts an international community which is as a result of being one of the largest oil producing states in Nigeria with a concentration of expatriate staff from many parts of the world. Details of the services available in PH are documented in Chapter 2, sections 2.3.1 to 2.3.6.

#### **6.1.0 Procedure**

A detailed questionnaire with 119 questions was used to interview 700 pregnant women in four modern medical settings and five traditional birth attendant (TBA) residences during their antenatal visits in Port-Harcourt. Sampling procedures are detailed in Chapter 4. Reasons for choice of obstetric services were elicited from the women. Among other variables considered, the impact, if any, of the role of spousal influence, social networks, birth history, service factors such as staff attitudes and previous "caesarean sections" (CS) were studied. Emphasis was laid on single, dual and multiple utilization. 17 women were successfully followed until delivery to observe directly the sequence of utilization and reasons for utilization, which may have been missed in the 1991 in-depth study and the analysis of the NDHS. The 1992 follow-up study is documented in Chapter 7.

#### **6.2.0 Analysis and results for the PH data.**

The following sections emphasize sources of data and analysis to ascertain the core aims of the research. What is the obstetric behaviour of women in Port-Harcourt and why? First, the demographic characteristics of women and the examination of user and service factors are examined.

### 6.2.1 Source of data

Table 6.1 presents the distribution of interviews by place of interview. Over half of the women, 58.4%, were interviewed at the University of Port-Harcourt teaching hospital (UPTH), and the least, 7.6%, at TBA residences. The number of interviews conducted was strictly dependent on the willingness of potential respondents.

**Table 6.1 Distribution of 1991 PH interviews by place of interview.**

Place	%	No.
UPTH (Teaching hospital)	58.4	409
Health Centre Orogbum	27.4	173
TBA residences	7.6	53
B. M. Hospital	5.3	37
Churchill H. Centre	4.0	28
Total	100.0	700

### 6.3.0 TBA antenatal patronage

Women go to TBAs for various reasons. First we investigated the patronage patterns exhibited by these 700 women. The responses to the question of whether they had visited a TBA in their current or previous pregnancies were basically similar so data for only current pregnancy are presented in Table 6.2.

**Table 6.2 Percentage of women visiting TBAs in current pregnancy in 1991 In-depth Study**

Visited	%	No.
No	66.1	463
Yes	31.7	222
Missing	2.1	15
Total	99.9	700

\*Percentage may not add up to 100% due to rounding.

31.7% visited a TBA during their current pregnancy, (the missing numbers in current pregnancy account for those who visited TBAs for infertility and those who did not answer the question), 37.7% visited TBAs for their last but one pregnancy while 39.4% had visited TBAs for their last but



two pregnancy. Therefore, about a third of those interviewed visited a TBA during each of their last three pregnancies. It is, thus, essential to establish why they visit a TBA. Below are the reasons for the various visits.

Massage seems to be the most important reason for the uptake of TBA services as indicated in the three pregnancies studied in Table 6.3 at 52%, 58.4%, and 57.8% respectively. Amongst the 200 women studied in the current pregnancy who visited a TBA 52% said they used her services for massage, 11% went for a check-up, 9.5% to position the unborn baby, 8.5% for infertility problems, 14.5% went for multiple reasons. Reasons for attendance for previous pregnancies were similar. A few women who saw TBAs for infertility problems and became pregnant, felt obliged to allow the TBA to care for them all through the pregnancy, but the numbers involved were too small to draw any conclusions. Massage thus seems to accord itself an important role in the utilization of obstetric services in Port-Harcourt. In order to re-confirm the pattern exhibited, details of persons seen are elicited for current and the last two other pregnancies in Table 6.4.

**Table 6.3 Reasons for TBA visits in last 3 pregnancies**

Reasons	Current Pregnancy %	Last but 1 Pregnancy %	Last but 2 Pregnancy %
Massage	52.0 (104)	58.5 (83)	57.8 (63)
Check Up	11.0 (22)	8.5 (12)	8.3 (9)
Position Fetus	9.5 (19)	12.6 (18)	8.1 (10)
Infertility	8.5 (17)	-	1.8 (2)
Close distance	2.0 (4)	5.6 (8)	3.7 (4)
Delivery	1.5 (3)	3.5 (5)	3.7 (4)
Prefer TBA	1.5 (3)	1.4 (2)	-
Many reasons	14.5 (28)	9.9 (14)	15.7 (17)
<b>Total</b>	<b>100.0 (200)</b>	<b>100.0 (142)</b>	<b>100.0 (109)</b>

### 6.3.1 Antenatal care in current and other pregnancies

Some women may not consider a visit to a TBA as an antenatal care service and that is why it is necessary to ascertain how many persons are involved in the care of the pregnant woman.

Table 6.4 Antenatal services used in last 3 pregnancies in PH

Services	Current Pregnancy %	Last but 1 Pregnancy %	Last but 2 Pregnancy %
Doctor/nurse only	55.4 (378)	53.4 (226)	52.3 (145)
Doctor/nurse & TBA	20.8 (142)	26.5 (112)	30.3 (84)
Nurse services only	16.3 (111)	9.7 (41)	6.9 (19)
TBA services only	3.8 (26)	4.1 (17)	5.4 (15)
Nurse & TBA only	2.5 (17)	3.3 (14)	2.9 (8)
Other combinations	1.2 (8)	2.8 (12)	1.8 (5)
No response	2.6 (18)	0.2 (1)	0.4 (1)
Total	100.0 (700)	100.0 (423)	100.0 (277)

Table 6.4 shows various combinations of antenatal carers or services utilized by pregnant women. 27.1% saw a TBA for their current pregnancy in combination with services while only 3.8% the TBA in isolation. This seems significant considering only 53 (7.6%) out of 700 respondents were met at TBA residences; thus confirming dual or multiple utilization. Similar patterns emerged for previous pregnancies and a careful examination of the categories in Table 6.4 show a preference for modern medical services with 71.7% of women using only their services; that is doctors and nurses services combined. Only 3.8% used TBA services in isolation in the current pregnancy. 24.5% used TBA services in conjunction with medical services. There seems a gradual increase from 59.2% to 63.1% to 71.7% in hospital usage over pregnancies. Conversely, there seems a decline in dual utilization at 35.4% from the 2nd pregnancy before current pregnancy, 31.8% in the pregnancy before the current pregnancy and 24.5% in the current pregnancy. If dual utilizers and sole users of TBA services are grouped together then a substantial 28.3% of women still utilize services of unqualified personnel in their current

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**Table 6.5 Percentage of women using antenatal care by level of education (numbers in parentheses).**

GRADE	DOC	DOC/NM	DOC/NM/TBA	TBA	DOC/NM/PC	NONE	TOTL
NIL	2.2 (1)	53.3 (24)	31.1 (14)	8.9 (4)	2.2 (1)	2.2 (1)	100.0 (45)
PRIM	1.5 (2)	61.3 (84)	28.5 (39)	8.8 (12)			100.0 (137)
SEC	2.5 (8)	68.5 (220)	22.1 (71)	2.8 (9)	4.0 (13)		100.0 (321)
DIP	5.3 (3)	71.9 (41)	21.1 (12)		1.8 (1)		100.0 (57)
DEGR	4.5 (3)	65.2 (43)	24.2 (16)		6.1 (4)		100.0 (66)
PROF	8.6 (5)	56.9 (33)	22.4 (13)	1.7 (1)	10.3 (6)		100.0 (58)
TOTL.	3.2 (22)	65.1 (445)	24.1 (165)	3.8 (26)	3.7 (25)	.1 (1)	100.0 (684)

From Table 6.5, amongst the 684 women who responded there was no observable consistent pattern of utilization of level of education except with single utilization of hospital services, that is, doctor/nurse, which increased with education. However, it is evident that for all categories, including women with nil education, the highest patronage was with hospital service utilization in antenatal care. Note that a chi squared test is done later in Table 6.16 where education is collapsed into none, primary, secondary and higher categories.

With dual utilization, there is a decline with increasing level of education and professional career. For example, women with degrees combine hospital and TBA services less (24.2%) than women with no education (31.1%). This may be due to the fact that the more educated a woman is, the more enlightened she is about the value of hospital services but she also wants to benefit from the service of the TBA. Women with diplomas and degrees do not utilize TBA service singly but 'professional' women do. This may be due to the definition of professional, as women who sew, fish, nurses, doctors, all look at themselves as professionals.

The low record of use of doctors in isolation depicts the system of operation, as doctors rarely provide services on their own. However there are a few isolated cases where doctors involved have a personal interest for one or several possible reasons. The second category with low numbers of patronage is service from doctor/nurse in private clinics; this is also understandable because their services are more expensive and the study did not include them directly. Their appearance in the data only confirms dual utilization within the modern health service by pregnant women.

With the existence of dual utilization, the sequence of utilization is evaluated below to observe how women prioritise their patterns of utilization:

**Table 6.6 Sequence of antenatal care utilization in the 1991 in-depth study for current pregnancy.**

1st Person Seen	%	No.
Nurse/midwife	85.0	588
TBA	9.6	66
Doctor	5.2	36
Auxiliary midwife	.1	1
Saw no one	.1	1
<b>Total</b>	<b>100.0</b>	<b>691</b>
2nd Person Seen	%	No.
Doctor	87.7	470
Nurse/midwife	7.6	41
TBA	2.6	14
Saw no one	1.9	10
Private clinic	.2	1
<b>Total</b>	<b>100.0</b>	<b>536</b>
3rd Person Seen	%	No.
TBA	61.2	106
Doctor	19.1	33
Private clinic	11.6	20
Saw no one	6.9	12
Other	1.2	2
<b>Total</b>	<b>100.0</b>	<b>173</b>
4th Person Seen	%	No.
Saw no one	63.1	12
Private clinic	21.0	4
Nurse/midwife	5.3	1
Auxiliary nurse/midwife	5.3	1
TBA	5.3	1
<b>Total</b>	<b>100.0</b>	<b>19</b>

It is interesting to note that the TBA appears in all stages of the sequence of utilization. Table 6.6 suggests that the TBA is more frequently seen as a third person. This indicates that women see their doctors and nurse/midwives before the TBA for various reasons indicated in Table 6.3. It could be inferred that the first preference in the sequence of utilization is the hospital. Below are reasons for this sequence of utilization:

**Table 6.7. Reasons for sequence of utilization for 1st pregnancy in the 1991 in-depth study**

Reasons	%	No.
Routine antenatal care	57.0	380
Good antenatal care	20.5	137
Multiple reasons	8.2	55
Detect abnormality	4.2	28
Know position of baby	2.5	17
Team work	2.3	15
No doctor available	1.8	12
Other reasons	3.5	23
<b>Total</b>	<b>100.0</b>	<b>667</b>

Table 6.7 suggests that 57% of women perceived the sequence of their patronage pattern as routine, while 20.5% classified the process as receiving good antenatal care. Another 8.2% gave multiple reasons as to why they utilized the service in that particular way. Pregnancy causes women a lot of anxiety and the need to know what is happening is regarded as important to women. This may explain why 6.7% of women practice dual utilization to know the position of the baby and detect any abnormality. Doctors are not usually endowed with effective communication skills with their patients as discussed in Chapter 2, a skill which the TBA specializes in. The position of the baby is also strongly associated with CS which most women want to avoid. It is interesting to note that some of the women view dual or multiple utilization as a process of team work by the various providers. About 3.5% of women gave specific isolated reasons for such sequence of patronage patterns.

#### **6.4.0 Delivery or Birth places utilized**

An examination of birth places utilized by women in their previous births indicates that the majority of births are conducted by trained medical personnel, with 65.7% of births at the hospital, 11.6% in private clinics, and 7.9% and 1.1% being conducted in health centres and health posts respectively. TBA conducted 8.9% of the births. Therefore, 86.1% of the women interviewed who have had at least one birth, had their last babies with the trained medical

personnel. The patterns for previous births and reasons given are similar as indicated in Tables 6.8. and 6.9.

**Table 6.8 Percentage of women by birth places used in last three births.**

	1st Birth Place %	2nd Birth Place %	3rd Birth place %
Hospital	65.7 (289)	64.5 (194)	64.9 (122)
Clinic	11.6 (50)	8.3 (13)	7.4 (14)
TBA	8.9 (39)	12.3 (37)	13.3 (25)
Health centre	7.9 (35)	8.3 (25)	8.0 (15)
Home	4.3 (19)	4.3 (13)	3.7 (7)
Health post	1.1 (5)	1.0 (3)	1.1 (2)
Other	0.7 (3)	1.3 (4)	1.6 (3)
<b>Total</b>	<b>100.0 (440)</b>	<b>100.0 (301)</b>	<b>100.0 (188)</b>

**Table 6.9 Reasons given for use of birth places in last three births in the 1991 in-depth study.**

	1st Birth Place %	2nd Birth Place %	3rd Birth place %
Quality of care	46.1 (199)	52.6 (153)	53.7 (95)
Previous experience	3.0 (13)	11.3 (33)	11.3 (20)
Husband's decision	25.0 (108)	14.8 (43)	14.1 (25)
Friends' advice	6.2 (27)	3.4 (10)	2.3 (4)
Distance	6.0 (26)	5.2 (15)	6.8 (12)
Reputation	4.2 (18)	4.1 (12)	4.0 (7)
Mother's advice	2.5 (11)	1.4 (4)	1.1 (2)
Multiple reasons	2.3 (10)	2.4 (7)	2.8 (5)
Cost	1.4 (6)	1.4 (4)	1.1 (2)
Technical birth	1.2 (5)	1.0 (3)	-
<b>Total</b>	<b>100.0(432)</b>	<b>100.0(291)</b>	<b>100.0 (177)</b>

For all three births considered, "quality of care" is the most important reason to women when considering use of a birth place, followed by their husband's advice. A further examination of husband's influence on their wife's utilization pattern revealed that 77.8% indicated that their husbands influenced their decisions, while 22.2% had independent decisions. This confirms the findings of Isiugho-Abanihe (1994) regarding Nigerian men making dominant decisions in reproductive issues.

A comparison of place of delivery by level of education is made to observe any consistent patterns. Table 6.10 indicates that the more educated a woman is the less likely she is to deliver at her own home or another home. Home



deliveries tend to stop after secondary education. Note that due to lack of relevant infrastructure home deliveries are rarely conducted by qualified medical personnel. See Chapter 7 section 7.4.2 on doctors views on this issue. A majority of the deliveries take place in the hospital (66.4%) followed by clinic/private clinic (20.6%) and then the TBA on her own at 9.1%. In the three birth places considered the hospital consistently retained the conduct of the highest number of deliveries with a mean average of 65%, followed by the TBA with 11.5% and the private clinic with 9%. Delivery in a woman's own home also seems to be consistent at an average rate of 3.9%. Note again that women with higher education and professional qualifications neither enjoy TBA or home births.

**Table 6.10 Percentage of last birth place used by level of education in the 1991 PH in-depth study (Numbers in Parentheses).**

GRADE	Home	Clinic/Hlth.cent.	Hospital	TBA	TOTAL
Nil	6.1 (2)	33.3 (11)	36.4 (12)	24.2 (8)	100.0 (33)
Primary	11.9 (10)	20.2 (17)	54.8 (46)	13.1 (11)	100.0 (84)
Secondary	2.6 (5)	21.8 (42)	67.9 (131)	7.8 (15)	100.0 (193)
Higher	-	32.7 (12)	67.3 (60)	-	100.0 (73)
Professional	-	13.3 (6)	77.8 (35)	8.9 (4)	100.0 (45)
Total	4.0 (17)	20.6 (88)	66.4 (284)	9.1 (39)	100.0 (428)

Having confirmed dual and multiple utilization women were asked who was their preferred care provider.

#### **6.5.0 Women's preferences, dislikes and wishes in PH obstetrics**

The emphasis of this study is to ascertain why women utilize obstetric services and in what sequence. It is therefore considered important if women themselves evaluated what they like or do not like in the services they use. Below are details of women's preferred obstetric service providers as

well as their dislikes and wishes for obstetric service in Port-Harcourt.

**Table 6.11 Women's preferred obstetric care provider in the 1991 PH in-depth study.**

Care Provider Preferred	%	No.
Doctor	56.2	307
Nurse/midwife	37.0	202
TBA	6.2	34
Auxiliary midwife	0.4	2
Private clinic	0.2	1
Total	100.0	546

**Table 6.12 What women disliked most in hospital in 1991 PH in-depth study.**

Reasons	%	No.
Long waiting hours	45.7	231
Nurses' attitudes	11.7	59
No drugs or facilities	17.2	87
Caesarian section	9.4	48
Preferential treatment	6.9	33
Antenatal cost	2.9	15
Other reasons	6.2	33
Total	100.0	506

45.7% of the women disliked the long waiting hours they spend at the antenatal clinics. Remember that women spend as long as six or more hours at antenatal clinics and the consideration of the days income for self employed women has already been discussed in Chapter 5. Another added cost is also the decision to forfeit having breakfast and lunch in the comfort of their own homes and having to purchase meals at a more expensive rate at the hospital. Some of the women arrive as early as 7.00 am. This was followed by 11.7% who did not like nurses attitudes. The attitudes disliked include rudeness, unpleasant remarks and abuses of patients by nurses. The figure representing dislike for nurses' attitudes has dramatically dropped from 70% in the pilot study to 11.7%; and some of the women stressed that the teaching hospital nurses were better behaved than the

General Hospital ones. Having known women's dislikes, they were asked to make recommendations on possible improvements in hospitals. Women's desires on hospital practice, as indicated in Table 6.13 clearly depicts an aim to reduce their dislikes expressed in Table 6.12. For example, employment of more staff desired by 36.2% of women would reduce waiting time disliked by 45.7% of the women.

**Table 6.13 Pregnant women's desires on hospital service in the 1991 PH in-depth study.**

Recommendations	%	NO
More qualified Staff	36.2	147
More drugs and facilities	24.1	98
Nurses to be kind	10.8	42
Doctors to be readily available	7.9	32
Free treatment/reduce cost	4.9	20
No preferential treatment	3.9	16
Larger accommodation	3.7	15
Shorter waiting time	2.7	11
Fewer caesarian sections	2.2	9
Clean hospital	1.5	6
Communication with patients	1.5	6
Ambulance accessibility	1.1	4
<b>Total</b>	<b>100.0</b>	<b>406</b>

The other recommendations are also linked to their dislikes of lack of drugs, nurses attitude, avoidance or elimination of CS and others.

**Table 6.14 What women disliked most in the TBA practice in the 1991 PH in-depth study.**

Dislikes	%	No.
Dirty environment	55.9	124
Unstandardized drugs	35.1	78
None use of gloves	8.1	18
No beds or cots	0.9	2
<b>Total</b>	<b>100.0</b>	<b>222</b>

For TBA practice as indicated in Table 6.14, 55.9% of women disliked the dirty environment of the TBA, 35.1% the lack of standardized drugs, while the remaining 9% disliked the non-use of drugs and the unavailability of beds and cots. These

dislikes clearly suggest that women are aware of some of the dangers and lack of hygiene associated with the TBA practice. It could thus be argued that either the level of awareness by women does not actualize the extent of danger associated with the TBA practice as denoted by the medical profession or that women feel the benefits they derive, outweigh the dangers.

**Table 6.15 Women's desires for TBA practice in the 1991 PH in-depth study.**

Recommendations	%	No.
Personal hygiene	38.9	63
Better accommodation	22.2	36
Government to assist TBAs	17.3	28
Quality of service	14.8	24
To work in hospital	3.1	5
Nothing	1.9	3
Water supply	1.2	2
Sterilize equipments	.6	1
Total	100.0	162

Women's desires for TBA practice are in Table 6.15, these include 38.9% suggesting improvement in personal hygiene for TBAs, 22.2% acknowledge the need for larger accommodation, 17.3% and 14.8% requesting assistance from Government and improvement of the quality of service respectively. Again, women perceive the inadequacies of TBA practices as limitations that exist and recommend ways of improvement. They have attached a value component to the service provided by the TBA and assert that it requires continuity.

Table 6.16 Percentage distribution of women's background characteristics by antenatal received in their last birth in the 1991 PH data.

Characteristic	Trained Medic	Dual	TBA only	No One	P-Value (likelihood Ratio)	Total
<b>Age</b>						.18
20-24	75.8	19.4	4.5	1.0		289
25-29	71.3	25.2	3.5	-		230
30-34	70.4	28.1	1.5	-		135
35-39	62.2	29.7	8.1	-		37
40+	25.0	75.0	-	-		4
<b>Education</b>						.00
None	58.7	30.4	8.7	2.2		46
Primary	64.4	28.1	7.4	-		135
Secondary	74.6	22.1	3.3	-		335
Higher	77.1	22.3	0.6	-		179
<b>Partner's Education</b>						.20
None	72.2	22.2	5.6	-		36
Primary	67.1	30.8	2.1	-		143
Secondary	70.7	23.3	5.6	0.4		266
Higher	76.8	20.8	2.4	-		250
<b>Resident Husband</b>						.81
Yes	72.6	23.3	3.9	0.2		636
No	69.0	28.6	2.4	-		42
<b>Childhood residence</b>						.00
City	68.6	26.8	4.6	-		239
Town	78.7	21.0	0.3	-		315
Rural	64.2	25.5	9.5	0.7		137
<b>Attracted by Staff Attitude/bureaucracy</b>						.00
Yes	74.8	22.6	2.5	0.2		563
No	61.4	29.5	9.1	-		132
<b>Watches T.V. Weekly</b>						.00
Yes	57.5	20.0	22.5	-		40
No	73.1	24.1	2.6	0.2		655
<b>Uses Radio</b>						.00
Yes	58.3	16.7	25.0	-		24
No	72.7	24.1	3.0	0.1		671
<b>By Massage at TBA</b>						.00
Yes	93.3	5.8	0.7	0.2		451
No	33.2	57.4	9.4	-		244
<b>Marital status</b>						.71
Married	72.5	23.5	3.8	0.2		663
Not Married	63.0	33.3	3.7	-		27
<b>Influenced by Partner</b>						.00
Yes	76.3	18.0	5.6	-		372
No	67.5	30.7	1.5	0.3		323
<b>Religion</b>						.59
Christianity	72.1	23.8	3.9	0.1		671
Islam	76.2	23.8	-	-		21
Other religion	-	100.0	-	-		1
<b>Influenced by Distance</b>						.91
Yes	72.0	26.0	2.0	-		50
No	72.0	23.8	4.0	0.2		621
<b>Kind of Worker</b>						.06
Employee	74.2	23.6	2.2	-		229
Self	62.7	29.7	7.1	0.5		212
Emplyr	50.0	50.0	-	-		2

\*Percentages may not add up to 100% due to rounding.

From Table 6.16, using the likelihood ratio test of significance at 5% level as with the 1990 NDHS data, we note for antenatal care for last birth in the 1991 PH data we

note that age, partner's education, residence of partner, marital status, religion and distance are not significantly related to antenatal care. Women's education, childhood residence, staff attitude, TV and radio usage, massage and partner's influence are significantly related to antenatal care. Note that trained medic stands for hospital services. With women's education it appears that women with primary and secondary education use both TBA and hospital services although women with secondary education use TBA services singly slightly more than those with primary education. They would however not do without antenatal care. Women with higher education use TBA services least. Women with no education use trained personnel least followed by those with primary education. It may thus be observed that women's education does not completely eradicate the use of TBA service but reduces it or at least induces dual utilization. Rural childhood residence is less associated with hospital usage than dual or complete TBA dependence. This may be due to several factors including TBA availability in the city as well as social networks and the belief system.

Women who do not like staff attitudes at the hospital practice dual utilization and use TBA services more than those who do not mind nurse attitudes. Some women indicated in the qualitative study that they do not have a choice despite nurses' bad attitudes but to attend hospital services. However, they think that the attitude of nurses have slightly improved. The number of women who do not mind nurses attitude is quite low and also reflects a low use of services but more to TBA services. Women who are influenced by their husbands use hospital services more than those who are not. They practice dual utilization less than those who are not influenced but use TBA services a lot more. Again, during the study it was found that a lot of women did not discuss their patronage patterns to their husbands and may keep it a secret if their husbands did not approve of a particular service.

There is an indication that Christian women used all services more than Moslem or women of other religions. Note that Christian women do not have any social or mobility restrictions like Moslem women. Similarly, distance only affected a few women in terms of patronage patterns. This may be due to the value placed on the need for patronage. When employment status was observed it indicated that women who are self-employed utilized TBA services more than employers or employees but employees used hospital services more than any other group. Mobility would certainly be easier for the self-employed woman than her counterparts as she may not need permission to attend antenatal clinics. It would, for example, not be officially acceptable for an employee to be granted permission to attend TBA services as she would the hospital.

There is an indication in the data that few women watched TV or listened to the radio although they lived in the city. For those who listened to radio, the majority still used only TBA services.

Table 6.17 Percentage distribution of women's background characteristics by place of delivery in their last birth in the 1991 PH data.

Characteristic	Home	Clinic /H.Centre	Hospital	TBA	P- Value (likelihood Ratio) Total	
<b>Age</b>						.23
20-24	5.3	25.6	55.6	13.5	133	
25-29	3.8	17.9	71.8	6.4	156	
30-34	4.5	15.2	72.3	8.0	112	
35-39	3.1	31.3	59.4	6.3	32	
40+	-	25.0	75.0	-	4	
<b>Education</b>						.00
None	5.9	32.4	38.2	23.5	34	
Primary	13.1	19.0	56.0	11.9	84	
Secondary	3.0	22.3	66.8	7.9	202	
Higher	-	15.4	80.3	4.3	117	
<b>Partner's Education</b>						.00
None	-	16.7	58.3	25.0	24	
Primary	5.2	30.9	56.7	7.2	97	
Secondary	8.8	18.2	62.3	10.7	159	
Higher	-	17.2	77.1	5.7	157	
<b>Resident Husband</b>						.23
Yes	4.2	21.1	65.4	9.3	408	
No	5.3	15.8	78.9	-	19	
<b>Childhood residence</b>						.03
City	3.8	21.0	66.9	8.3	157	
Town	2.8	22.2	69.9	5.1	176	
Rural	7.9	17.8	58.4	15.8	101	
<b>Attracted by Staff Attitude/bureaucracy at hosp</b>						.00
Yes	4.7	23.4	64.9	7.0	342	
No	3.2	10.5	70.5	15.8	95	
<b>Watches T.V. Weekly</b>						.00
Yes	6.7	26.7	36.7	30.0	30	
No	4.2	20.1	68.3	7.4	407	
<b>Uses Radio weekly</b>						.01
Yes	-	21.1	47.4	31.6	19	
No	4.5	20.6	67.0	7.9	418	
<b>By Massage only at TBA</b>						.00
Yes	4.6	26.2	65.4	3.8	260	
No	4.0	12.4	67.2	16.4	177	
<b>Marital status</b>						.48
Married	4.2	20.8	66.1	8.9	428	
Not Married	14.3	14.3	71.4	-	7	
<b>Influenced by Partner</b>						.00
Yes	3.2	12.1	69.4	15.3	124	
No	4.8	24.0	64.9	6.4	313	
<b>Religion</b>						.29
Christianity	4.0	20.5	66.5	9.0	424	
Islam	9.1	27.3	54.5	9.1	11	
Other religion	100.0	-	-	-	1	
<b>Influenced by Distance</b>						.37
Yes	7.1	25.0	50.0	17.9	28	
No	4.0	20.7	67.0	8.3	397	
<b>Kind of Worker</b>						.00
Employee	-	19.5	74.5	6.0	149	
Self	6.1	20.2	62.6	11.0	163	
Employer	-	-	100.0	-	1	



From Table 6.17, using the likelihood ratio test at 5% level of significance, we note that for delivery in last birth in the 1991 PH data age, partner's residence, marital status, religion and distance are not significantly related to place of delivery. Women's education, partner's education, childhood residence, staff attitude, TV and radio usage, massage and partner's influence and kind of worker are significantly related to place of delivery. With women's education it appears that women without any education have the least hospital delivery while women with secondary or higher education deliver more in hospital and health centres. Also of note is the fact that home delivery is only enjoyed by women with no, primary or secondary education. Home births are usually conducted by TBAs or relatives, not by qualified personnel. Women, whose husbands have no education or have higher education do not have home delivery. It appears as though women's use of hospital delivery increased if their husbands were more educated. Women who grew up in the town or city delivered more at clinics or hospitals than women who grew up in rural areas. Conversely women who grew up in rural areas have home births and TBA deliveries more. Interestingly, childhood rural residence also indicate hospital and clinic delivery substantially. This may be due to the curiosity of the women to try new options as was identified by one of the doctors in the qualitative study.

Women who do not like staff attitudes at the hospital deliver more at the clinic/health centre, followed by delivery at home and slightly less at the hospital but least at the TBAs. However, women who do not dislike nurses' attitudes deliver more at the hospital than at home or at a clinic, but deliver mostly at TBAs. Women who are influenced by their husbands mostly deliver at hospitals followed by TBAs. If women are not influenced then they are most likely to deliver at a hospital. For kind of worker, if a woman was an employee, she is most likely to deliver at a hospital or

health centre rather than at a TBA's. She would not consider delivery at home. Delivery at a TBA or at home would not produce the required birth certificate for tax clearance.

There is an indication that women who watched TV or listened to radio used more of hospital services than they did TBA services for delivery. However about a third of women who either watch or listen to radio weekly use TBA delivery services. A majority of the women are aware of massage availability at the TBA's but still have hospital delivery services. This confirms the women's view that they go for massage because they find it helpful but feel hospitals are more able to handle complicated than TBAs. TBAs also confirm that they are limited to normal deliveries and would pass on complicated and difficult ones on to the hospitals.

#### **6.6.0 Logistic regression analysis**

Multivariate logistic regression analysis is used to study factors influencing antenatal care and assistance at place of delivery. The variables are listed in Section 6.6.2. Details on the multivariate analysis procedure are explained in Chapter 5 section 5.7.0.

#### **6.6.1 Antenatal care and assistance at delivery**

#### **6.6.2 Antenatal care**

The following variables are used to potentially explain antenatal care:

- (1) Age of Woman (Less than 30 versus 30+). AGE
- (2) Educational level (None, Primary, Secondary, Higher) EDUC
- (3) Husband/partner's education level (as above) HEDUC
- (4) Whether women think staff attitude at hospital is bad or not. STAFF
- (5) Tetanus injection and multivite drugs required by women at the hospital or not. HOSDRUG
- (6) Whether women want maternity leave, beds and equipment for caesarian section and if they are available at the

- hospital or not. HOSFACIL
- (7) Whether women want TBA's drugs and herbs or not.  
TBDRUGS
- (8) Whether women want massage at TBA's or not. MASSAGE
- (9) Whether women disliked unstandardized drugs at TBA's or not. UNSTDRUG
- (10) Whether women disliked the dirty environment at TBA's or not. ENVIRON
- (11) Whether women perceived hospital facilities to be inadequate or not. INADFACIL
- (12) Whether women thought the frequencies of caesarian sections at the hospital were justified or not.  
FCAESAR
- (13) Whether women thought the hospital to be efficient or not. HOSEFF
- (14) Whether it takes a long time to be seen at the hospital or not (Long time was 2 or more hours). LONGHRS (Note that at TBA's, all stated that they spent a short time.)
- (15) Whether husbands influenced women's patronage or not.  
HINFLU
- (16) Whether they listen to the radio or not. RADIO
- (17) Whether they watch television or not. TELLY
- (18) Place where women lived until 12 years of age DWELL
- (19) Preferred obstetric care provider PRECARE

### 6.6.3 The delivery model

The following variables are used:

- (20) Type of antenatal care service used. ANTECARE
- (21) Preferred delivery for the next birth. DELPLACE
- (22) Stated reason for choosing birth place (Previous experience, husbands's advice, mother/friends's advice, quality of care (includes reputation and other reasons).  
REASON

#### 6.6.4 Antenatal care model

Antenatal choices are between Hospital, TBA and Dual utilization. We use the Begg and Gray (1984) procedure for approximating the fit of a multinomial logistic regression model. Three logistic regression models were carried out on the possible outcome on; TBA versus Hospital, TBA versus Dual, and Dual versus Hospital. Each model being fitted is of the form

$\text{logit}(p) = B_0 + B_1X_1 + B_2X_2 + \dots + B_kX_k$ , where the X's are the different factors such as educational level, staff attitude and  $B_0, B_1, B_2, \dots, B_k$  are the coefficients to be estimated.

The model selection procedure used is stepwise selection, whereby a variable is entered into the model and checked for significance. If it is significant it stays in the model otherwise it is removed. When a new variable is entered in the model, all the existing variables in the model are also checked and the insignificant ones removed.

#### 6.6.5 Interpretation

For the dependent variable (Use of TBA versus Use of Hospital for Table 7.16), the category that is coded as 1 is the numerator event. So the model estimates the odds of going to a TBA as opposed to going to a hospital.

Table 6.18 Antenatal Care - TBA versus Hospital-1991 PH in-depth Study

Parameter	Estimates	Standard Error	Odds (N=525)
<b>Respondent's husband's influence:</b>			
Yes	0.00	-	1.00
No	-1.8571	.6024	.1561
<b>Attracted by Staff attitude/bureaucracy</b>			
Yes	0.00	-	1.00
No	1.5912	.5027	4.9096
<b>Place lived until 12 years old</b>			
City	0.00	-	1.00
Town	-2.6556	1.0623	.0703
Countryside	1.0211	.5022	2.7762
<b>Watches Television</b>			
Yes	0.00	-	1.00
No	-2.3475	.5662	.0956
CONSTANT	-.7206	-	

Table 6.18 above indicates that for antenatal care, women who are not influenced by their husbands have a 84.4% decrease in the odds of using a TBA versus the hospital compared to women influenced by their husbands. In other words, husbands' influence indicates a preference for TBA antenatal care against the hospital. Television usage also indicates a negative influence on TBA patronage with a 90.4% decrease in the odds of TBA patronage. There is an also indication that if a woman spent the first 12 years of her life in a town she has a 93.0% decrease in the odds of using TBA services compared to those who grew up in the city, instead of using hospital services. Conversely, if she grew up in the Countryside (rural area), she has a 177.7% increase in the odds of using TBA antenatal services compared to hospital services. If women are not attracted by staff attitude and bureaucracy at the hospital they had a 390.9% increase in the odds of using TBA antenatal services compared to hospital services.

The inclusion of massage and the uptake of tetanus toxoid injection seem problematic as both services are unique to their providers. In this analysis they have both been taken out of the model because they clouded the analysis by making all the other variables insignificant and were dominantly

the only significant variables at very extreme levels. However, it is worthy to note that massage is the most frequent and important reason given for TBA patronage while TBAs say they refer patients to hospital because they realise the usefulness of tetanus toxoid injection.

\*  
Table 6.19 Antenatal Care - Hospital versus Dual-1991 PH in-depth Study

Parameter	Estimates	Standard Error	Odds (N=409)
<b>Type of ANC used for earlier pregnancies</b>			
Trained medic only	0.00	-	1.00
Dual	-7.1620	.7672	.0008
TBA only	3.3197	34.8972	27.6510
CONSTANT	4.8828	.7098	

When hospital and dual utilization were compared only previous antenatal care used was significant. Table 6.19 indicates that if a woman was a dual utilizer in her previous pregnancy she had an 99.2% decrease in the odds of being only a hospital utilizer than she would be a dual utilizer. If she was a sole TBA utilizer then she had a 2665.1% increase in the odds of being a hospital utilizer than she would be a dual utilizer. This indicates that sole TBA utilizers are more likely to turn to hospital services than dual utilizers changing to use hospital alone.

Table 6.20 Antenatal Care - TBA versus Dual-1991 PH in-depth Study

Parameter	Estimates	Standard Error	Odds (N=190)
<b>Respondent influenced by husband:</b>			
Yes	0.00	-	1.00
No	1.9291	.7792	6.8831
<b>Likes lack of facilities in hospital:</b>			
Yes	0.00	-	1.00
No	-1.4842	.6696	.2267
<b>Likes long Waiting time at hospital:</b>			
Yes	0.00	-	1.00
No	2.1067	.7321	8.2208
<b>Watches Television</b>			
Yes	0.00	-	1.00
No	3.0789	-	21.7343
<b>Dislike unstandardised drugs at TBA</b>			
Yes	0.00	-	1.00
No	2.5338	.9904	12.6016
<b>Place lived until 12 years of age</b>			
City	0.00	-	1.00
Town	1.9705	1.2069	7.1746
Countryside	-1.4892	.6994	.2255
CONSTANT	-5.2452	-	

Table 6.20 indicates that if a woman is not influenced by her husband she has a 588.3% increase in the odds of using the services of the TBA alone, for antenatal care as opposed to her combining both the services of the TBA and the hospital. Similarly, if she does not like long waiting time at the hospital, she has a 722.0% increase in the odds of using TBA services alone as opposed to being a dual utilizer. If she does not watch television then she has a 2073.4% increase in the odds of using TBA services than she would combine it the hospital service. However, even if a woman thinks that there were inadequate facilities at the hospital she still has a 77.3% decrease in the odds of using TBA services alone than she would be a dual utilizer. Similarly if she grew up in the countryside she has a 77.4% decrease in the odds of being TBA utilizer than being a dual utilizer. It was not significant if she grew up in a town.

#### 6.6.6 Delivery Place

TBA versus Hospital. Factors explaining place of delivery were studied with the exception of those who had no help in their delivery and those who stated 'other'. 363 stated 'Hospital', 59 stated 'TBA' 8 stated 'No one' and 6 stated

'Other'. 'No one' and 'Other' categories were looked at individually using SPSS.

Table 6.21 Delivery Care - TBA versus Hospital-1991 PH in-depth Study

Parameter	Estimates	Standard Error	Odds (N=316)
<b>Child born alive but dead</b>			
Yes	0.00	-	1.00
No	-2.2383	.5447	.1066
<b>Type of ANC used for earlier preg</b>			
Trained medic only	0.00	-	1.00
Dual	3.6393	.8007	38.0637
TBA only	12.9952	28.9664	440284.0000
<b>Watches Television</b>			
Yes	0.00	-	1.00
No	-2.0947	.8462	.1231
<b>Preferred obstetric Carer</b>			
Doctor	0.00	-	1.00
Nurse/Midwife	.4449	.5691	1.5603
TBA	2.8524	.8103	17.3290
Private clinic	-3.1252	99.6346	.0439
CONSTANT	-1.7445	1.0103	

Table 6.21 indicates that if a woman had not experienced the death of a child after delivery she 89.34% increase in the odds of having TBA delivery. If a woman practised dual utilization then there is an increase of 3706% in the odds of her using a TBA for delivery care compared to using the hospital. If a woman preferred TBA delivery care then she has a 1732.9% increase in the odds of delivering her baby at the TBA's than at the hospital. If a woman used the TBA alone for her last antenatal care then she has an overwhelming in the odds of having a TBA delivery. If a woman does not watch television, she has a 87.6% increase in the odds of a TBA delivery.

### 6.7.0 Summary

In summary, the analysis of the 1990 NDHS data indicated the existence of dual utilization. Out of the sample of 8781 women 6653 (75.8%) had given birth before and 971 were currently pregnant at the time of the survey. When last birth in the five years prior to the survey were considered, about 5% received antenatal care from TBAs, 58.4% from the



hospital, and dual utilization was 1.4%. A significant 35.4% of women did not receive any antenatal care. These figures represent the national picture, and out of the 1651 responding to these questions, 20 (1.2%) practised dual utilization with as much as 6.2% involving the TBA.

When assistance on delivery was considered for the last birth in the five-year period the TBA had an overall patronage of 22.5% while the qualified medical personnel had 30% of all deliveries. As many as 18.9% of women delivered themselves and 22.2% had missing data.

When hospital utilization was separated by residence, there was an overall patronage of 52% in the urban and 48% in the rural areas. When antenatal utilization in the national urban areas was considered, out of 1795 women interviewed, 2% of them utilized TBAs and 1.3% utilized the native/church/mission category. However, another 100 of the urban women practised dual utilization of which 54% involved the TBA for antenatal care.

The national data indicated that in the five year period before the NDHS in the urban areas the TBA assisted in about 13% of all births in Nigeria, while the native/church/mission group also assisted in another 12% of births, another 13% delivered themselves. Thus cumulatively, this indicates that in the urban areas of the nation where hospital services abound 37% of births are conducted by non-medical personnel.

In the NDHS when utilization was observed in Rivers state, out of 184 women interviewed, 49.4% of them utilized antenatal care from trained medical personnel while 15.3% sought care from TBAs, 5.1% were dual utilizers while as much as 30% did not receive any antenatal care. In other words, for the whole of Rivers state 45.3% of the women do not receive antenatal care from trained personnel. For

delivery, trained medical personnel conducted 33.3% of deliveries in the last birth in five year period, while TBAs conducted 50.5% of deliveries and others including self deliveries added up to 16.3% deliveries. This means that untrained personnel conduct 66.7% of all births. Urban figures were too small to analyze.

The 1991 in-depth study in Port-Harcourt indicates that of all women interviewed, 37% had visited a TBA before, with 27% of women visiting in their current pregnancy. 52% of the women visited for massage, 11% of went to check-up their pregnancy, 10% went to TBAs to cure infertility, 9% went for multiple reasons while another 10% went to position the unborn baby. Only 2% of women visited a TBA for reasons of distance and another 2% went because they preferred the TBA care. Reasons for attendance for previous pregnancies were similar, with higher percentage of 58% for massage. For antenatal care in PH urban, 30% practised dual utilization involving the TBA. 9% had other combinations of dual utilization, including private clinics. Only 0.2% of women did not use any form of antenatal care. There is evidence of switches from one pregnancy to another in five year period studied for women who have had more than one baby. For antenatal, 8 women switched their patronage pattern, while for delivery 34 women switched. All switches favoured the TBA more than the trained medical personnel.

In the multivariate analysis there was an indication that for antenatal care; women's husband's influence inclined more to TBA service utilization than the hospital. This finding was not affected by education as education was not significant in the analysis. This would certainly be an area for further studies as men do not attend antenatal classes or delivery sessions of their babies. It is not clear if there are issues of empowering women to make these decisions themselves. It was also indicated that television usage and childhood urban residence positively influenced hospital

usage, which is expected. However, rural childhood residence, long waiting time at hospital, dislike for nurses' attitude and previous dual utilization indicated a preference for TBA services or dual utilization.

For delivery; if a woman has not experienced a child's death, the likelihood of her having a TBA delivery service is increased. Similarly, if she was a dual utilizer, does not television, and her preferred delivery carer is a TBA or she was a sole TBA antenatal service utilizer then she is most likely to a TBA delivery.

Women continued to resound the need for massage in pregnancy all through the study. Thus modern medical practice may need to research and consider the possibility of providing massage in its service provision either through the employment and continued training of TBAs or incorporate such training into physiotherapy or occupational therapy. The issue of massage is further discussed in Chapter 8. Other crucial issues stated by women through this study include long waiting hours, bad nurses attitude, inadequate facilities and lack of drugs in hospitals. All these issues could be resolved through the propagation of adequate policies and implementation to improve service quality and encourage women to utilize acceptable maternal services and reduce maternal and infant mortality.

## Chapter 7

### Qualitative Analysis of 1991/1992 Port-Harcourt Follow-up Data and Interviews of Care Providers

#### 7.0 Introduction

Chapters 5 and 6 are on quantitative analysis of the 1990 NDHS and the 1991 Port-Harcourt local data respectively. This chapter is in two sections, the first section presents the qualitative analysis of a small sample of 17 women followed up from their 1<sup>st</sup> and 2<sup>nd</sup> trimester of pregnancy to delivery. The second section describes the interviews of three sets of care providers: doctors, nurses and TBAs all in 1991/1992. The focus is to reference feelings, pressures and understanding of service users and providers using direct quotes when possible. The study involved observing directly the sequence of obstetric service utilization and the circumstances leading to such utilization patterns.

In the study of respondents, research assistants visited respondents monthly in their homes. During the visits respondents were interviewed about their present state of health, the services they had utilized, intended to utilize and why. Also elicited are problems encountered, as well as fears women entertained. The interview schedule used served as a guide as research assistants asked follow-on questions from respondents' responses. The schedule is attached as Appendix 7.1. The outcome of the analysis indicates the circumstances within which respondents make their choices and show the extent of women's beliefs in the services they utilize.

The second section presents views of "care providers" namely, doctors, nurse/midwives and TBAs about their patients and service utilization. This analysis is carried out to ascertain their perceptions on the quality of service provision and the impact such views might have on service

utilization. What improvement or changes if any, are solicited by service utilizers. Indeed, health services utilization may be influenced by the structure of the health care system, the behaviour or perceptions of health care providers as well as the actions of patients. This view is supported by Mckinlay (1972) and Anderson (1973). The interviews were analyzed by using the Ethnograph package (Seidel et. al, 1988). One advantage of using Ethnograph package lies in the fact that one is able to test for concepts within the expressions of respondents. However, due to small numbers we exclude comparable tests of care providers and patients followed up and lay emphasis on common themes and quotes in the analysis. The package enables the researcher to get the particular concept anywhere it is expressed by all respondents. The frequency of occurrence indicates the importance placed on that particular concept by respondents. The concepts tested in the analysis include: home delivery, education, payments in instalments, times spent, deaths experienced in service use, hospital referrals, massage, training, nurses' attitudes and treatments for fibroids. Most of the concepts were not expressed as important by respondents. The use of a code sheet (see appendix 6) was helpful in identifying concepts. The more frequently expressed concepts are documented below.

#### **7.2.0 PH follow-up study**

The follow up study, was initially aimed at 30 pregnant women selected randomly from the 700 interviewed (see Chapters 4 and 6) from their first trimester of pregnancy to delivery. However, analysis of the quantitative data showed that the majority of the women registered after the first trimester of pregnancy. This discovery consequently altered the plan to include women in their 2<sup>nd</sup> trimester of pregnancy. Table 7.1 presents the distribution of duration of pregnancy at which the 700 women were interviewed.

Some of the women delayed their registration for financial

reasons, while others wanted to be sure of the pregnancy before registering. When they register, there is a clear indication of multiple registrations. Some register with the hospital/TBA, others with the hospital/private clinic; and yet others with hosp/TBA/private clinic, or with hosp/TBA/another TBA/prayer house and so on. These multiple registrations compound the issue of cost of antenatal care and delivery. This may be why women registered late for antenatal care. Perhaps they wait until they raise enough funds to meet the various registrations planned for the pregnancy. Table 7.2 shows women's antenatal patronage in the last five pregnancies.

Table 7.1 Distribution of ages of pregnancy at the point of interview in PH

age of preg (in months)	No.	%
1	8	.7
2	17	2.4
3	37	8.3
4	88	8.3
8	100	14.3
6	127	18.1
7	119	17.0
8	113	16.2
9	104	14.9
Don't know	20	2.8
Total	700	100.0

Table 7.2 Antenatal care received by women in the last 5 pregnancies

Carer	No. of women.				
	1st	2nd	3rd	4th	5th (pregnancies)
Trained medic(doc/nur)	802	278	168	95	86
Trained medic &TBA	166	132	95	61	40
TBA only	26	17	15	12	8
No one	1	1	1	1	1

This confirmed the hypothesis of dual or multiple utilization of the study. It is noteworthy that despite multiple registrations the women said they readily knew their appointment dates and regularly attended clinics and

also had their immunizations. They said multiple registrations facilitated second and third opinions. It also afforded them the access to services not available in one unit of provision. For example, massage is solely a TBA service, while tetanus injections are only available at the hospital and health centres. It also accords them the confidence in finding a nearby delivery place if labour speeds up faster than expected and they are unable to get to their preferred place of delivery.

Out of the 30 women initially identified only 17 were successfully followed up until delivery. Sometimes, research assistants had to visit two or three times before meeting respondents even when appointments were previously booked. The number of respondents successfully followed up by each research assistant were in the ratio of 4, 4, 5 and 4 respectively. Amongst the 13 women not followed up, 3 had miscarriages and were too distressed to continue the study. They were all in their second trimester of pregnancy (4, 4, and 5 months respectively). Two of them were single utilizers of the hospital service while one (5 months pregnant) was a dual utilizer of the hospital and the TBA. 7 of the women could not be traced because they lived in difficult, unplanned, temporary and unapproved residences with no structured addresses. Research assistants made four to five unsuccessful attempts to visit before giving up. Another 3 were prevented by their husbands from participating in the study. The two reasons given were:

- 1) they did not want facts about their wives taken to England, and
- 2) they did not want strangers coming to their homes, their birth process was personal to them as a family.

However, those who agreed cooperated and did not mind disclosing their identities except one of the respondents.

#### **7.2.0 Analysis and the results**

The study of the 17 women concentrated on observing how women utilized services and for what reason. However, it is essential to document some of their socio-demographic characteristics.

##### **7.2.1 Socio-demographic Characteristics**

Table 7.3 shows an inverted U shape age distribution of the women followed up in the study with the largest proportions being in the age groups 25-29 and 30-34, and the smallest in age groups 15-19, and 35-39, one of the respondents did not know her age. This pattern reflects the age-specific distribution of the fertility rates.



Table 7.3 Ages of Respondents followed up

Age	Number	Percentage
15-19	1	8.9
20-24	2	11.8
25-29	8	29.3
30-34	6	35.3
35-39	2	11.8
NS	1	8.9
	17	100.0

(NS response means Not Stated)

All the women were married except one who was engaged and cohabiting. The consideration, therefore, is to examine if there is a relationship between women's or their partner's occupation and their patronage patterns. These occupations are directly related to their educational qualifications.

Table 7.4 Patronage pattern by respondents and their Partners' occupations

Occupation		Patronage pattern	
Respondent's	Partner's	hospital/TBA	hospital only
ward maid	machine operator		hosp
trader	trader	TBA/hosp	
trader	soft drink distributor	TBA/hosp	
housewife	business man	TBA/hosp	
housewife	lawyer		hosp
secretary	banker		hosp
teacher	business man	TBA/hosp	
civil servant	lecturer	TBA/hosp	
accountant	accountant	TBA/hosp	
trader	trader	TBA/hosp	
street trader	engineer	TBA/hosp	
civil servant	civil servant	TBA/hosp	
civil servant	legal practitioner	TBA/hosp	
trader	trader	TBA/hosp	
public servant	n.s		hosp
teacher	civil Servant		Hosp
seamstress	electrician	TBA/hosp	

Table 7 .4 indicates that neither the occupation of women nor their partners determine TBA utilization. In other words, type of occupation does not seem to debar use of TBA services. Moreover the only woman who uses "hospital only" is a manual worker and so is her husband, although her work in the hospital may have created a bias against TBA services. However, the fact that some nurses and doctors patronize herbalists and TBAs cast doubt on this suggestion.

### 7.2.2 Attitudes of carers

The attitudes of carers has continually been suggested as a factor in utilization of health services so the women were asked how doctors and nurses treated them. Nine women said they were "nice" to them, while seven said they were "okay" but maintained that what was more important to them was that both they and their babies were alright. One respondent was not so pleased with nurses' attitudes, she expressed her feelings about nurses in the following quote:

"At times they don't behave well, I don't know whether their husbands annoy them at home and they carry it to the hospital; moreover when you come late here, they say I am not your servant, I am not this, I am not that, this is not the time for you to come for antenatal, you should go back and come back the next day. They don't consider the transport difficulty we encounter on the way. They say I cannot overwork myself, I am the only one here registering the new mothers, weighing them, giving them cards, I am doing this, doing that, attending to this and so on"

It is understandable that women rationalize that if they and their babies were safe, there was no reason to worry about the behaviour of nurses but the above quote illustrates the frequently cited problems with nurses' attitude in health care provision. Other problems highlighted in the quote are inadequate staffing levels and difficulties with transportation, which are synonymous with utilization issues in developing countries.

A majority of the women (10 out of the 17) saw different doctors and nurses throughout their care in hospital. One respondent when asked if she saw the same doctor during her visits summed up the experience nicely in this quote:

"No it depends on where your card goes, if it goes to the same doctor, you see him, if it goes to another doctor you see him, but still in the same team"

This is a reflection of service delivery elsewhere, especially in western countries with the exception of some general practitioner (GP) practices where one has the privilege of seeing the same doctor when they are not fully booked or on holiday. All twelve women who use TBAs saw the same TBA during all their consultations and had quick attendance at TBA residences. Below are some of their quotes when asked if they saw the same TBA:

"The same old woman, for her, there is no movement"

"Although the mama has some workers she does all the massage and she is always there"

"There, we don't waste time-o, we just press and go"

"Since we don't have much complaint, highest stay is 20 minutes"

The word press here refers to massage, massage was one of the factors indicative of the reasons for TBA patronage in the Port-Harcourt data of 700 women in Chapter 6. When the maximum waiting time of 20 minutes at TBA residences is compared to the routine hospital average waiting time of 2 to 6 hours, then time is an issue in the discussion about utilization.

When asked why do you go to the TBA? These are some of the responses:

"When I have pains I will come to the hospital, tell the doctors I have pain and they will only use that thing, funnel, I don't know what you people call it, and listen to the baby, that is all but this native woman will massage you, bring up the child if the child is on the wrong side and you won't feel the pain as you were feeling before; But I will not have my child there, I only go for the massage; I will still go to the hospital to have my child there"

"I prefer TBA because the TBA explains the position of the baby and

allays my fears; the doctor just palpates and prescribes drugs. I think TBAs know the job more than the doctors, they even tell you whether it is a boy or girl"

When asked specifically why they go for massage the women gave the following responses:

"Yes; the massage relieves lower abdominal pain"

"It relives the nerves"

"Mostly this my lower abdominal pains, when I go there, when the woman finishes, you see the relief, but in the hospital they only give panadol"

"I go because I want to know the position of the baby, it makes me feel better"

"To make sure that the baby lies well before labour commences"

Massage repeatedly shows up in all the reasons given by women so the effectiveness and the process may need to be scientifically analyzed in future studies. From the women's experience massage relieves pain in the stomach, waist and legs as well as determining the position of the baby and turns breech presented babies. It is equally clear that although massage relieves pain, the relief is not permanent and thus leads to high frequency and could cumulatively lead to an expensive venture. Women went for massage before and

after the had antenatal visits to the hospital. They may go for massage if informed at the hospital that there is a likelihood of a C.S. Sometimes after a massage session they return to the hospital and the doctor confirms that the baby is then lying properly for normal delivery. On the other hand they go for massage when in pains. After delivery, women's feelings were appraised about massage and they maintained its usefulness and plan to continue to use the service in their next pregnancy. Similarly the few women who did not use TBA service maintained their determination in not using TBA services:

"You know my feelings about TBAs and with my age (38) I don't want to take chances. If I'll give birth again, I shall go back to the hospital"

When women were asked about drug availability, they confirmed that their routine drugs were mostly available in hospital but they had usually bought other drugs from chemists shops quite expensively:

"Some were available, some were not, I had to buy them from the chemist"  
When asked about the cost the reply was: "Compared to the hospital, they were expensive"

When asked about TBA drug dispensation the women gave the following responses:

"The man (referring to a male TBA) does not give drugs"

"They don't give drugs except you have serious problems, Like you can't get pregnant or you cannot deliver"

"No I don't take drugs, I just go for massage"

"If you complain of anything then she will give you leaves, she will put in kai-kai (referring to traditionally brewed gin), or if you don't like it then she will put it in Sprite or any other liquid for you, but if you don't have any problem she won't give you, she will not force you"

These quotes affirm that the TBA sees pregnancy as a natural process rather than as a pathological situation and that does not need any intervention unless problematic and must be at the instance of the patient. It is interesting that the TBA adjusts to the likes of their patients by using Sprite - a western or modern drink with her drugs. A pictorial presentation of the leaves and barks used by TBAs are in Chapter 3.

The issues causing women anxiety in pregnancy include:

- the position of the baby,
- breech presentation,
- swollen feet,
- waist pains,
- anaemia,
- swollen ankles,
- painful varicose veins, and
- epigastric pains.

Birth places utilized by all the women included: the UPTH, the BMH, private clinic, and a maternity home, all in Port-Harcourt, with the exception of one respondent whose mother insisted she went home to the village to deliver in a maternity home so that she could look after her. 15 of the respondents had normal deliveries, two had cesarian sections at the UPTH, one of whom lost her baby. The women said they did not deliver at the TBA's residence because the hospital was better at handling complications. Other reasons for place of delivery included emergency and fast labour.

To conclude, the follow-up study revealed that women regularly attended antenatal clinics, had their immunizations and routine drugs whenever available from the hospital. They also went to TBAs for massage to relieve pains or to turn their breech babies to avoid CS. However, women preferred to deliver at the hospital for fear of complications.

### **7.3.0 Study of care providers**

In this section care providers' perspective of obstetric services and reasons for service utilization are examined starting with the TBA.

#### **7.3.1 The TBAs' perspective of obstetric service provision and reasons for utilization of their services**

There is a register of TBAs for Rivers State but not for



Port-Harcourt, presumably based on the erroneous notion that TBAs are a rural phenomenon. There is no mandatory law requiring TBAs to register but there are zonal health centres for TBA registration to record their existence and practice.

Six TBAs were identified in different localities in Port-Harcourt after discussions with pregnant women. One is male but was unavoidably absent in the month of study because he had travelled to the rural area to be with his wife who had just had a baby. The other five females TBAs were observed for a month (starting 2\10\92) and interviewed with the schedule affixed in (Appendix 7.2). The main focus being to elicit their views concerning why women patronized them.

The interviews were conducted, photographs of TBAs and some of their clients were taken, as well as the materials they used, all with their informed consent. Interestingly all TBAs agreed but some of their clients refused. TBAs tried to persuade their clients but had no control over them. Each TBA was visited about ten times during the course of the study.

### **7.3.2 Demographic characteristics of TBAs**

Out of the five TBAs interviewed, only two knew their ages, and were 32 and 46 years old. The reason for this lack of knowledge could be that they were illiterate. Those who did

not know their ages were said to be 65, 70, and 75 years of age by their educated relatives. All the TBAs were married and had children of their own. They lived in high density areas of the city and did not have adequate accommodation. Three TBAs were not willing to work at the hospital if they had the opportunity because they were illiterate, while two TBAs were ready to work in hospitals if the remuneration was attractive enough.

Four TBAs learnt the art of being a TBA from a member of the family, while one TBA felt it was a talent endowed upon her. Three TBAs were training non family members, one was training her daughter still maintaining the tradition of running the practice within the family. One of the TBA students had dropped out of secondary school. This new trend of commercialising TBA art which initially was kept within the family casts doubt on the school of thought that TBAs would naturally become extinct. TBAs estimate training to be between six months and three years depending on the learner's intelligence. One TBA feels that the introduction of formal education has caused disinterest in young people learning from her. The same TBA thinks two things have influenced her practice, education and accommodation.

"These days, children have started going to school, so they are not interested in learning from me, they would have to learn from somewhere else"

### 7.3.3 TBA antenatal care provision

TBAs have no formal methods of antenatal care provision, but common among their practice is the process of massage, some detect labour through massage, others by vaginal examination, through experience, and some a combination of the processes just described. Some of the TBAs claimed they could diagnose a week's pregnancy from the face of the woman and by palpation. All TBAs agree that amenorrhea is a sure sign of pregnancy. Other factors are abdominal distention, morning sickness and darkening of the nipples. Some TBAs say the pregnant woman could visit them from one month while others say the pregnant should see them when she experiences some problems yet others said she should be coming regularly for check-ups and massage.

All TBAs claim that they can turn the position of the baby from breach to cephalic presentation. TBAs use oil to massage women and the women feel relief. They also prescribe drugs from roots, leaves, and clay material for use by pregnant women. Photographs of some of the materials are in Chapter 3. Efforts to diagnose the names of the plants in the botanical laboratory in Nigeria failed. TBA examination or massage of pregnant women are carried out on mats, flat wood or on the TBA's bed at TBA residences.

#### **7.3.4 TBA delivery service**

The TBA treats the woman in labour as her child, encourages her to push, empathizes and shows sympathy, rubs her back, holds on to her and so on. The TBA does not complain if the woman scratches her or screams. The TBA stays by the woman through labour until the baby is delivered and does not delegate responsibility. On delivery, the TBA bathes the woman and the baby, feeds the woman with pepper soup - a valued traditional meal. TBAs say the pregnant woman feels at home right from the first day she meets the TBA till she delivers. The woman is allowed to stay at the TBA's home from one day to a week if she does not feel up to going to her own home.

Delivery positions include stooping, lying down, and sitting, but the primary consideration for use, depends on the mother's comfort, her experience and baby's safety. Only one TBA indicated consideration for the need of the carer to have a good view of the delivery process.

Four TBAs conducted home deliveries and visits. However, they acknowledge that more deliveries are conducted at the TBA's rather than at women's homes. The decision as to where to deliver was dependent on the woman rather than the TBA. Sometimes, TBAs are called to deliver women who have not seen them throughout their pregnancy and they readily go to

deliver them wherever they wanted. All TBAs give both women and the children their baths at delivery and afterwards, and 'set' the woman's womb after delivery. It is not clear what this 'setting of the womb' is, but obviously it has a lot of importance and value attached to it. Doctors presume they may be referring to the shrinking of the uterus after delivery. All TBAs feel husbands may be allowed to pet their wives during labour but should not be around during delivery because it is not culturally acceptable. This denial of access has led to a growing incidence of husbands refusing to leave. TBAs do not report the births they conduct to any official authority. Four TBAs make referrals to the hospital, one does not. Cases referred include: retained placenta, prolonged labour, and women who can't deliver and need caesarian section. All TBAs stated that they had never experienced any deaths of either mother or child. Some TBAs feel family planning is sinful, while those who believe in it recommend abstinence or may give roots or herbs, but they feel their primary responsibility is to cure infertility rather than promote family planning.

#### **7.3.5 Hospital referrals made by TBAs**

When asked on the criteria for referrals, they gave the following statements:

"When I look at the work and it is too hard for me, then I send her to the hospital"

"If I can not handle it, like the placenta does not come out, then I refer her to the hospital"

"I check for difficult ones and send them to the hospital since I cannot operate"

"When the labour has come to reach the stage when the woman is no longer able to push, or when the woman comes, she is in labour, that is first pregnancy, I ask her to lie down and I use my finger to measure (demonstrating and putting finger to the waist or belly line), and if the head is not engaged, I do not touch again, I send her to the hospital"

It is, therefore, not surprising that all the TBAs claimed not to have experienced any deaths in their long years of practice. These methods of referrals agree with the maternal mortality rate findings by Briggs (1988). However the TBAs have a completely different claim about death.

For example, one the TBAs says:

"No, in fact, when sometimes their babies die while they were in hospital and they come, I tell them not to be afraid and we mix leaves and drink and treat them and they bring out the dead body, everything comes out"

#### **7.3.6 Problems of TBA practice as identified by TBAs**

The only problem acknowledged by TBAs is that of accommodation:

"Yes, my major problem is accommodation and because of the generalization about how dirty our work is, we find it difficult to get good accommodation. I am not dirty, I keep my environment clean and I use hand gloves to deliver the women, I use mackintosh to deliver women, some people deliver with empty hands"

"Because I do not have a good accommodation, I am now concentrating on treating people"

### **7.3.7 Sources of TBA patronage**

All five TBAs interviewed, profess to have a geographically widespread patronage, with their clientele from all over the country indicating a high patronage. Below are direct quotations from some of the TBAs:

"Some come from neighbouring villages around the city, some from other cities, far and from all cultural backgrounds, some from other states as well"

"From all over the state and involves other cultures, including other states"

"From all over the country that are resident in the state"

### **7.3.8 Cost of TBA Services**

An investigation of the cost of TBA patronage revealed varying charges, sometimes more expensive than the hospital. For instance, for some TBAs, registration costs 100 naira,

for early pregnancy, 50 naira for late pregnancy, while each time the woman came for massage she paid 5 naira. For delivery, the woman would pay 150 naira for a boy and 140 naira for a girl. Another TBA charges 300 naira from pregnancy till delivery. Yet another TBA charges 60 naira for delivery, and 3 naira for each massage. One TBA takes whatever is given to her, and as she puts it;

"What do they really pay me, anything they give me I take, even snuff is enough, I do not do it for money"

The flexibility is that even those who charge money, give free treatment to women who cannot pay or accept payments in instalments.

#### 7.3.9 Reasons given by TBAs for patronage of their Services

TBAs gave the followings reasons for their patronage.

Women patronized them because:

- (1) they played with them,
- (2) of their good practice, which included bathing the women after delivery and 'setting their wombs',
- (3) they give the women the opportunity of having normal delivery as opposed to cesarian section,
- (4) they massage them,
- (5) they give them food even when their husbands do not provide for them,
- (6) they do not advertize themselves, women who have



utilized their services spread the good news and those who used their services keep coming back.

They are perhaps better expressed with their own quotes;

"The way I play with the women. And when they deliver, I give them their bath, keep the womb alright through massage, I also give them food to eat, when their husbands have not brought food for them, I cook for them, some of them have had as many as four to five deliveries by me. They really like my work. Even when the husbands do not bring money, I still give them"

"I do not advertise myself, people spread my good work and people come to look for me. I do not charge people much, I am nice to them, if they do not have the money, I let them go"

"They see the good work that I do, I check and press the belly"

"They want normal delivery, and I set the womb for them and give them normal treatment. They take in and so they come and deliver here instead of at the hospital"

"The women would have to answer that for themselves, I do not advertise myself. Children come in different forms, some with the leg, others with the hand, it is not an easy work. I do not do it for money. They come because they like my work"

#### **7.4.0 Discussion**

It is essential to note that all five TBAs interviewed in this study emphasised the point of not advertising themselves. Despite this claim, TBAs were observed during

the study to have a lot of antenatal patronage and record between four and ten deliveries each in a month. This seems surprising as they practice in an industrialized city where there are many hospitals and clinics at the reach of everybody. Considering the large number of women who use TBA services, one can hypothesize that TBAs possess special traits that attract women to their services. TBAs claim these traits to be massage, affective behaviour, normal delivery and cost of their services.

All the TBAs massage pregnant women and indicate this as one of the reasons why women patronize them. There has been a lot of literature on massage assuming its benefits. For example, Van Why (1990) asserts that massage is assumed to have established benefits in no need of proof. However, TBAs have identified three main functions of massage. In pregnancy TBAs maintain that massage softens the nerves of the pregnant woman, relieves pain and positions the unborn baby for normal delivery. After delivery, massage sets the womb and prevents the woman from passing gas frequently. According to Westland (1993) massage is the aware and conscious manipulation of the soft tissues (muscles, fat, connective tissue and skin) of the body for therapeutic purposes. Westland further relates the therapeutic functions of structural massage to include pain relief, improved blood circulation, increase in mobility and tension release and enables relaxation. Westland's (1993) observations agree

with the reasons given by TBAs and the women who use their massage services in pregnancy. Calvert (1992) affirms that massage is inextricably concerned with touch, a natural extension of touch. It forms a non-verbal communication with a client at a level of relationship which is beyond words; it stimulates the process of "essential touch" involving energy movement from one person to another, creating a process of "feeling connected" (Smith, 1990). This process involves the ability of the practitioner to respond to the unspoken needs of the client, being sensitive and giving the appropriate touch. It is quite different from the indifferent perfunctory touch described by Huss (1977).

All the TBAs emphasised that women liked their work and look for them. They associated this with their 'affective behaviour' such as being nice and playing with the women. This is an issue that has frequently been identified as lacking in the behaviour of hospital staff especially nurses (Islam *et al.*, 1993;). Some nurses in Nigeria are said to be harsh, rude and indifferent to patients. Patients assess affective behaviour as part of the quality of care they expect to receive in a service. Phillips (1981) agrees that quality does include the level of professional care, availability of drugs and the 'affective behaviour' of staff and ancillary workers to service users including bedside manner and order of speech.

Another extended affective service raised is that of "personal care" such as bathing at the point of birth and afterwards. TBAs bathe the women and their babies after delivery and continue to visit them at home days after the delivery. Similarly, free treatment, payment in instalments and free meals for patients are unique services provided by TBAs.

Another reason raised by TBAs is assured normal delivery offered only by TBAs. It is culturally forbidden for a woman not to have births per vagina. Births achieved vaginally is valued as a personal, usually uniquely feminine accomplishment. Almost every woman would like to have a vaginal birth because it give the best chance of resuming their normal social roles quickly. The pressure is more on working women who need to return to work and run their chores at home as well. CS is compounded by factors such anaesthesia and a major surgical procedure. Women thus dread CS and do almost anything to avoid it. The pressure to avoid CS is also related to the myth contained in the statement "Once a cesarean always a cesarean" (Flamm *et al.* 1984).

Another popular belief is that CS limits one to a maximum of only three or four births. This is totally unacceptable in a society like Nigeria where a high value is placed on children and it is not uncommon for people to have between 6 and 10 children. Similarly because of the high infant mortality rate, people believe the more children one has the

higher the probability of keeping some alive. It is, therefore, not surprising that CS is very unpopular and its avoidance has led to several deaths in Nigeria. In the month of the study 2 women with previous CS; one a trained nurse and the other a Phd in zoology both died at TBA residences in Aba and Lagos respectively (both industrial cities) in their efforts to avoid CS. They both lived and worked locally in Port-Harcourt.

Most hospitals are hesitant to attempt trial labour after CS for reasons such as lack of facilities and risks of tear from the old scar of previous CS. However, Clemenson (1993) has promoted the safety of vaginal births after CS. Clemenson stressed that, the possibility of a cesarean section occurring in a trial of vaginal birth after cesarean, is not higher than it is in a primiparous woman giving birth and stated the reasons for repeat CS without trial labour per vagina to be: physician bias, discomfort with vaginal birth after CS, convenience of repeat cesarean delivery and patient preference. Clemenson resounds the need to inspect and select patients by type of scar, as well as ascertain when in labour the cesarean section occurred.

In the US women who have gone through CS report feelings of failure, guilt and disappointment (Hedahl 1980, Lipson 1980). They perceive their experience as significantly different from women with vaginal births. They are less

satisfied with their experience and themselves. They are hesitant to name their infants and view their deliveries as abnormal and stigmatising (Marut and Mercer, 1979). This is understandable as the whole process of CS make women loose control of the labour process.

Although four out of the five TBAs attended home deliveries, none of them mentioned this as a reason for patronage. One of the TBAs indicated low cost as an attraction for women, but it was found that cumulatively the TBA charges were more than that of the hospital because she charged separately for massages. Women tend to have massage about once or twice a month. However, cesarean sections continue to be the most expensive service for women who attend hospitals. Perhaps women prefer the TBA mode of payment as it does not put any stress on them and they could pay with ease. They also know that they would not be embarrassed even if they could not pay. At the time of the survey, it was understood that some hospital social workers had also started rescheduling debts in the teaching hospital. There were already stories of people defaulting in agreed arrangements. Presumably the failure to honour such debt reschedules could be due to genuine inability to pay and or as well as the perception of health service being a part of the national cake which every person should be entitled to having free of charge. In all it seems a good start by the hospital authorities.

The unique contribution of this study is in soliciting TBA views. Previous studies have always stressed TBA willingness to refer patients to hospitals, their use in family planning or enrolment for training but not their views on patronage. It has also identified reasons or considerations for referrals to hospitals by TBAs. Finally these findings are all within an industrial city and all 5 TBAs had migrated from their rural villages competing actively with their modern medical counterparts.

Pertinent amongst the findings on the TBA perspective are: TBAs feel their work is unique and desired by pregnant women because of their affective behaviour. TBAs have a monopoly of a massage service in pregnancy. Massage is said ease pain and discomfort in pregnancy and position the unborn child for normal delivery. It thus prevents CS and 'sets' the stomach after delivery. TBAs are flexible with payments for their services. TBAs participate in personal care and visit their clients. TBAs exclude themselves from the incidence or prevalence of death by making referrals at stages where they find themselves unable to cope. TBAs assure women of normal delivery per vagina.

#### **7.5.0 Doctors' Interviews**

The interview with doctors (consultants) was the most difficult to achieve as they were very busy. Out of the five interviews planned only four were achieved and the

interviews were conducted outside clinic hours. The researcher used an interview schedule and solely conducted all the interviews. The interviews were conducted within a week in September of 1991 using an interview schedule as a guide.

#### **7.5.1 Results**

The doctors aged 42, 54, 55 and 57 years had all been practising for 10 to 20 years. They all confirmed that after registration the women were assigned to a partial appointment system by nurses: in that they were given dates for appointments but not the specific times to be seen by doctors. They equally affirmed that although women were advised to register after they miss their second period, most of the women do not register until their second trimester of pregnancy with the exception of women with a history of infertility and those in their first pregnancies.

The consultants acknowledged the presence of bureaucracy and expressed the difficulty in personally attending all women in their teams. They relegate the responsibility of screening to junior doctors, who need to build up experience and send complicated cases to them. They assert that have always explained to women whenever the occasion arises that if they are not seen by the consultants, it is a good sign as they are more likely to see complicated cases.



All consultants are aware of the clinic routine before women see them. They say it is essential to have clinical and laboratory investigations which give information on the state of the woman's health. The practice for a normal delivery is that the woman stays in hospital for 24 to 48 hours before discharge. However, the ideal situation is for the woman to stay for a week as complications can still arise within this period. This is not done because of the pressure and high demand of the job.

Some of the consultants do not see distance as an issue, they say:

"If you place a good thing somewhere, like anywhere in the world, people will still come to it, and of course with the question on distance you must bear in mind that because it is far away from you does not mean it is not near to other people, that is what life is all about"

None of the doctors conduct home deliveries or home visits, they say it is not their responsibility. It is up to nurses and health visitors to conduct home visits. They also acknowledge that the nurses do not visit patients because of the logistics involved. When asked if the doctor meant difficulties with transportation he says:

"Not only that, it is difficult to trace the homes unless you are taken there, so many difficulties, transportation, and so on, and not all patients would like you to come and visit them in their homes, they want their privacy"

The above quote replicates the same problems of tracing homes encountered by the research assistants in the follow up study. Another reason why doctors do not conduct home deliveries is evident from the following quote:

"Personally, I do not believe in home deliveries even if it is a normal delivery, anything can go wrong and the machinery or logistic of taking her to the hospital is not there. It is very risky; home setting is not the best"

The doctors are very much aware of the structure and function within the hospital. They are aware of the cost of care in the hospital: 200 naira for antenatal and normal delivery rising up to 700 naira involving cesarian section. They are also aware of the waiting time which is well represented in the following quote:

"It would depend on when she comes to the clinic, let me explain, you see, when they come, they are processed by the nurses. A woman who comes in at 7 am, if she is processed quickly may leave at 9 am; that is 2 hours isn't it?, but it is also possible that she could spend as much as 4 to 5 hours"

### 7.5.2 Doctors on Cesarean Sections

When asked how they reach decisions about cesarian sections and women's understanding of this operation the consultants gave the following answers:

"The commonest circumstance for a cesarian section is when we find ourselves where there is a disparity in size; that is between the baby and the birth canal, the medical term is disproportion, but there are many"

The consultants confirm that 6-7% of the 3000 births per annum in the hospital end up as Cesarean sections. When asked do women understand the need for a CS?

The doctors said:

"We try and make them understand, we don't just put them on the table and cut them because they have to give an informed consent. But for some illiterate women, when you see them for their next pregnancy and ask them, despite all the pains you've taken to explain to them, they tell you they were just operated upon and no one told them anything. By and large majority of the women understand why they have done a CS"

"Many of them do not understand. They think it is a curse to have a CS depending on where they come from - a cultural thing, but it is worse with the husbands; they don't understand why we should. I have a woman in there who has a problem; the first was a CS and the baby died and I think we should quietly bring the baby out, but the husband does not see any reason why we should. The husbands are a problem"

Doctors confirm that husbands do not request to be present at birth and even if they did, they would not be encouraged because the labour wards are open and decency would not operate if husbands were allowed to come in. However, there is a plan for partitioning in the new UPTH site.

### 7.5.3 Doctors on TBA Services

When doctors were asked about their knowledge of TBAs these were the interesting responses:

"Sure I was delivered by a TBA and most guys over 40 years like me were delivered by TBAs. As you know WHO policy is to support TBAs practice where health facilities are not available. As you also know TBAs have their own problems; they are not able to recognize life threatening situations early to refer patients to receive proper medical attention. I am aware of them, and as a person I do not like them, I would wish that a situation arose whereby nobody went to them. My country is not that pragmatic, strive as I do, wish as I may, they would continue to deliver women for a long time"

"Yes I am aware of the TBA practice, in fact I am one of the anti- TBA consultants"

"They are a prominent feature of health service in Nigeria. They have extended their practice to all aspects and overlap with treatment of disease and superstitious beliefs and practices in obstetrics. They enjoy degree of federal government support in consonance with world wide effort to integrate them where care supplies are not available. What stands in their favour is that they are nearer the patients and their being more or less related to them. WHO interest in TBAs is nearly 60 years old and

so Nigeria is not left out. This would generally not sink in among gynaecologists. Where TBAs have been evaluated there does not seem to be any sound contribution, but they have been successfully used to reduce the incidence of neonatal tetanus by teaching them about the handling of the cord"

When asked if TBAs made referrals to them, the doctors responded with the following quotes:

"Yes, they wait until they are gasping then they quickly tell her relatives to pack her quickly and rush her to the hospital - if you call that a referral or an ejection - I do not know, in my mind, it is an ejection; you must not die here, go and die at the hospital. They do this partly because they want their money and partly because they do not know the import of what they are dealing with"

"I'm not quite sure but there are some that come in when they can't handle it any more"

"Yes, I think they do but they are in the background; they send them to maternity or nursing home and from there they are referred here, the cases include obstructed labour, transverse cases - bleeding cases etc. they have tried to turn and not succeeded"

"Well, occasionally we have heard statements that TBAs have asked them to come in emergencies"

#### **7.5.4 Similar referral patterns observed by TBAs and doctors**

This research shows that both the doctors and TBAs have similar perceptions on the timing and modes of referrals,

with the doctors having a clearer understanding of the dangers in the referral process. It is, therefore, necessary to continually educate TBAs on the dangers involved. There is definitely a need to work closely with TBAs if the maternal mortality rate is to be reduced at all. Note that the value of service availability to adequately deal with emergencies cannot be overemphasised. Loudon (1991) maintains that the reduction of maternal mortality is not solely dependent on the type of patronage utilized in pregnancy. He emphasised its' importance but stressed that the availability of emergency services to cope with complications outweighs good antenatal care utilization. This argument is strengthened by Kaunitz's (1984) observation whereby members of a Faith Assembly of God in the USA, who had good care and nutrition but would not access hospital services, had a 872 per 100,000 MMR compared to the national figure of 8 per 100,000. He maintained that the availability of simple medical resources such as antibiotics and syringes can make a lot of difference to maternal deaths. The 'OS' syndrome in Nigerian hospitals have already been discussed and the experience of lack of facilities during the research narrated.

#### **7.5.5 Doctors views on TBA patronage**

Doctors were also asked about why women patronized TBAs and the existence of dual utilization. They gave the following answers:

"Accessibility; they are more accessible than us"

"Their mothers encourage them since that's where they delivered them"

"They are cheaper"

"They are more... you know, the aura which surrounds medicine - the uniforms etc., You speak only in English, the TBA speaks to them in their mother tongue, so there is a lot to attract them to a TBA"

"It's a time thing - what you are used to, and a question of confidence in it. They were born by TBAs and they have had it for many years"

"There is a general background lack of confidence in the health care delivery system. TBAs have a good background and patients have confidence in them. There is also a lack of information on health matters. The health authority treats health along the same lines as other issues. The budget does not favour the health authority very much. The infrastructure is not there; roads, housing, water supply, communication etc. The PHC has not yielded enough fruits in obstetric care; it may have done so in infectious diseases. Sometimes women go to TBAs as a result of need e.g. transportation difficulties. Recently, it is not only TBAs, but paramedics, auxiliary nurses, nurse assistants, patent medicine sellers; in an unpublished series in this hospital were incriminated to be causing as much harm as the TBA. If a woman is satisfied, she promotes the cause, but if she comes and things are not available she is discouraged"

#### **7.5.6 Doctors on Dual Utilization**

On dual utilization they said:

"I do not know, but from my observation; the average pregnant woman

registers in 2 hospitals, 1 private clinic, with a TBA, and has an informal auxiliary nurse, to be sure they have something to hold on to"

"The reason why women go about - some register in 3 or 4 places is because they are insecure"

"Some of them think there is something in modern medicine that they can get"

"That's the one I can't explain; it is quite pertinent. I have a case of a nurse in this hospital who patronizes a TBA - quite a substantial number of pregnant women patronize TBAs. Over the years I have observed that the average Nigerian woman is quite confused and gullible - anything anybody tells her - she listens to; she goes out on the road, they tell her your belly is too big, go and see this woman - she goes and if they say it's not this one, it's the other one she goes. In fact I think it is because she has got very little knowledge about pregnancy, herself, that she is so frightened and fall a prey and anyone can take advantage of her. It is the anxiety to make sure that nothing goes wrong"

The reasons given by doctors on TBA utilization and lack of or relatively low utilization of hospital services include ignorance on the part of both TBAs and pregnant women. They maintain that women have known TBAs for a long time and are used to them. TBAs are very accessible and older women encourage their pregnant daughters to utilize TBA services. This is further perpetuated by women's insecurity and gullible attitude. Doctors recognize and advocate the need to educate both pregnant women and TBAs regarding the



dangers associated with TBA service provision. On dual utilization they say that some women have identified something useful and so combine both services.

They assert that the environment in which hospital services are provided have imbedded disadvantages: for example they are surrounded by the aura of uniforms, foreign language (English is used), added to the inadequate funding and budgetary allocations made to hospitals. This emanates itself through under staffing and inefficient provision of service. This further undermines women's confidence. Cost of care required at the point of delivery is also alien and difficult for users to adapt. Below are the views of nurses.

#### **7.6.0 Interview of Nurse\midwives**

These nurses are called nurse\midwives because they have sub specialized in midwifery after their nursing training. Nurses were more accessible than the doctors so it was not difficult to schedule their interviews. In all, five volunteer nurses were interviewed as planned separately by the researcher, all on the same day.

#### **7.6.1 Results**

The nurses were aged 29, 30, 31, 32, and 34 years. Three of the five nurses were married. All the nurses were qualified and have had varying experiences in other departments before work in the antenatal clinic for as long as 4 months, 4

years, 3 years 7 years and 10 years respectively.

#### **7.6.2 Hospital Obstetric Care as Observed by Nurses**

Nurses maintain that it is advisable for pregnant women to register in their first trimester of pregnancy but most of the women wait till five months or more before they register. All the nurses confirm that women "book" with 100 naira for antenatal registration but disagree on the level of convenience of the sum paid. Two nurses felt it was convenient amount and while the other views are better expressed in the quotes below:

"It depends on the woman's social status, but majority of them pay"

"No, it is not, they don't. Some of them when you tell them the amount, they feel shocked, because they thought it used to be the 50 naira that they were formally paying. They just increased it, may be, last year"

This disagreement is understandable in that it is easy for people to use their circumstances to assume others ability to pay or afford services or goods. The nurses assert that women book with them and with other clinics and so they don't bother if women do not turn up for their appointments. What is puzzling is women's ability to register in many places when they assert cost to be a problem. This affirms the doctors' view that pregnant women become insecure and gullible in pregnancy and do whatever is suggested to them.

On the other hand, it may be that because women see it as essential to register in several places for emergencies and security antenatal care becomes compounded and expensive cumulatively.

Nurses confirm that women spend about 3 to 6 hours for each antenatal clinic attendance. From their experience 30 to 40% of the women who register with them do not deliver at the hospital. Nurses say there is still a shortage of beds (currently having only 8 beds) on the labour ward but women do not share beds any more, they are kept on the antenatal wards until they are ready to deliver. There is, however, a shortage of theatres for emergency deliveries. When asked why the women do not deliver at the hospital they gave the followings answers:

"Well, most of them want private care, In the private clinics, they are not many women and the doctors attend to them with special care"

"Some of them say it is the fees; admission fees, delivery fees etc."

"Some get scared of being operated upon and some are afraid of the hospital fees. They can't afford it"

"Well, most of them they prefer going to the private clinics or to these TBAs; with reasons best known to them, they have this belief that, nurses are rude, from other people, that they don't take care of patients etc. but those of them who deliver here say the nurses are good"

### 7.6.3 Nurses on TBA practice

All the nurses are aware of the TBA practice and it is surprising that some of the nurses actually patronized the TBA services. This issue had already been pointed out by one of the doctors. Below are some of the quotes from the nurses relating their contacts with TBA services and why women patronize them;

"My aunt is a TBA, I go to her and some of our nurses deliver there, you would be surprised"

"One of my relations was there, so I went out of curiosity to see what happens there"

"Yes I've used TBA services before, but since I became a nurse I have not been to them, apart from going to visit some relations who deliver there"

The nurses gave the following reasons for TBA patronage:

"I don't know, they have faith in them and most of them are afraid of CS"

"As I said before, because of cost, it is cheaper, and they have more attention, the women stay close to them; like one told me 2 days ago, when you go there, they would remain with you and be massaging you; in the hospital, no care, they will just leave you to push on your own, but the woman supports them"

"Emm., they feel that when they have lower abdominal pains, they go as the massaging helps"

"Umm.. it is sort of traditional taboos and the rest of them. They believe that if the woman is pregnant she must go for massages so that the baby would be in good alignment and so on"

"Some say they go to them so that labour could be easier; that's all I think and some deliver there because the fee is less"

"They don't like CS, they prefer the TBA because there they would have a normal delivery at all cost"

When the nurses were asked what should be done to improve the hospital services they came with the following responses:

"The women should be told to book because most of them have lost their lives through that. The doctors don't come in time, they call them "unbooked" cases. Such women come from TBAs, prayers houses, health centres and so on. I know of a Phd holder, a senior lecturer in the university of Enugu. She had two previous c.s. in the USA, then she wanted normal delivery and went to the TBA, she nearly lost her life, she ended up with a hysterectomy in the hospital. The TBA had assured her of a normal delivery. She lost everything except her life"

"Let me take our hospital set up as an example, I think if they have more nurses and doctors; then the women would not have to wait that long. And also in our labour ward, if we have more hands, the women will prefer to come to the hospital"

"Okay I feel it would be better for the authorities to arrange a better normal routine; the records, the accounts, pharmacy, the blood, eh; the haematology; they are always here but right now, we don't have the reagents to test their urine, so all the women coming now, there is no urine test -which is very important in antenatal care"

#### **7.6.4 Observations recorded on nurses' interview**

Several common issues are in the expressions of nurses. Massage has resurfaced on the agenda and so has c.s. More important is the 'affective behaviour' of TBAs which overrides those of hospital staff to women in labour. It is obvious that although nurses work in hospitals and educate women on the usefulness of hospital services they also patronize TBAs. This confirms the hypothesis that the hospital has a lot of home work to do before expecting women to patronize their services effectively. It also casts strong doubts that education would eradicate the patronage of TBAs. The fact that a majority of TBA utilizers are illiterate while a minority are educated does necessarily reflect the role of education but may be reflecting the ratio of educated women in the Nigerian society. The 1990 NDHS records a 75% level of illiteracy for women.

#### **7.6.5 Gender and International Context of this research**

This study has primarily focused on Nigerian women's obstetric behaviour using both national and local P.H. data. However, in view of the fact that some of the findings

validate other findings regarding practices and feelings of women in Nepal, South Africa, Kenya, the USA and others indicate its' international context. The similarities focus on feelings surrounding caesarian sections, the presence of support during delivery, the effect of staff attitude, TBA's increasing costs and others. The Presern (1996) study for example, identified higher TBA costs compared to hospital charges in some communities, the strong effect of religion, staff attitude and women's emphasis on quality of care. Presern's study, however, did not identify the demand for TBA services among educated women and medical practitioners including nurses. She also did not realise the existence of dual utilization. Another difference is that her study did not identify TBA antenatal service utilization, whereas PH TBAs provide antenatal care service which is regularly utilized by Nigerian women. In Presern's study, women did not have other options but in PH many options were available and women knew, joggled and accessed them as they wished. In Nepal mother-inlaws were the decision makers whereas in Nigeria husbands were more influential.

Another international factor identified is the funding to maintain safe motherhood which usually is derived from external bodies either exclusively or in conjunction with the specific national government (Phillips, 1990).

This study also raises the issue of gender, as the feelings

and experiences are specific to women only. It is therefore, of crucial importance that policy makers and governments listen to women. Reissland and Burghart (1989) suggest that women are subtly negotiating the terms on which care should be given to them. It has been indicated that there is evidence of discrimination in health care provision and research based on gender in favour of men (Kirschstein, 1991; AMA, 1991). It is therefore necessary to reiterate the risk factors in pregnancy and the need for politicians and policy makers to recognize the uniqueness of women's health and have a broad as well as specific knowledge of interventions necessary. We therefore call for a political will and commitment to preserve and maintain women's health. This study offers other countries and bodies interested in women's health the opportunity to test out the issues raised by Nigerian women.

#### **7 7.0 Summary:**

The issue of obstetric service utilization in a developing country is quite complex and difficult to interpret. TBA obstetric practices are deemed dangerous by the medical profession but their services continue to be utilized by women in the Third World. Health services utilization may be influenced by the structure of the health care system, the behaviour or perceptions of health care providers as well as the actions of potential patients. Some opinions are formed by observation, others are facts derived from utilizers, and



from service providers. The strength of this study is that it is a combination of the two sources.

This research presents the perceptions of providers (TBAs, doctor and patients) regarding the utilization of services by pregnant women in the city of Port-Harcourt, Nigeria. Reasons given for their patronage are: "massage", normal delivery, "affective behaviour", and flexible modes of payments. TBAs maintain that their good services advertise them with references from previous patients to new ones. The only compounding problem all TBAs acknowledged to have was one of inadequate accommodation.

The interview of nurses reflected the importance of massage in pregnancy and the desperate need to avoid caesarean sections. At the time of the study there was a prevalent rate of 7% CS of births per annum at the hospital. More important is the 'affective behaviour' of TBAs which overrides those of hospital staff to women in labour. Nurses blame their lack of care on inadequate staffing levels resulting also in long waiting times. It is obvious that although nurses work in hospitals and educate women on the usefulness of hospital services they also patronize TBAs. This confirms the hypothesis that the hospital has a reformation task to implement before expecting a high level of patronage. It is thus doubtful that education would eradicate the patronage of TBAs. The fact that a majority of

TBA utilizers are illiterate partially reflects the high levels of illiterate women in Nigeria.

Doctors suggest TBA service utilization to be the outcome of a long term conditioning to TBA services and ignorance on the dangers associated to TBA services by TBAs and pregnant women. They say TBAs are very accessible and older women encourage the pregnant daughters to utilize TBA services. This is further perpetuated by women's insecurity and gullible attitude. Doctors recognize and advocate the need to educate both pregnant women and TBAs regarding the dangers associated with TBA service provision. On dual utilization they say that some women have identified something useful and so combine both services.

Doctors identified imbedded disadvantages in hospital services to include; the aura of uniforms, the use of English language, inadequate funding and under staffing which erode women's confidence. Cost of care required at the point of delivery of service is also alien and difficult for users to adopt.

It is clear from the combination of these sources that neither the hospital, the TBA service or a combination of the services adequately meets the needs of pregnant women. The women have thus become confused as to what to do to secure a pregnancy and have a safe delivery. In their

search, they run into problems, of which no one system or person can bear the blame or responsibility.

#### **7.7.1 Possible Policy Related Considerations**

1. What can be done about women's desire or needs for massage? Note that it is a service that cuts across education, age and occupation. Is this a service that can be provided by the modern medical set-up? If yes, who should provide the service? Should it be the nurse, the largest patron of pregnant women or the physiotherapist whose role may be easily adaptable to massage. Or should it be provided by someone outside of the traditional health system? What is the relationship between the TBA massage service and the current 'massage' and 'yoga' exercises recommended for pregnant women by some authors (Balaskas; 1990)?

If massage is dangerous and women derive such relief from it: what measures should be taken to convince women that what they feel is not real but psychological? And who can explain the pain and it's relief better than the pregnant who feels it?

2. Are there ways of reducing the amount of time spent in hospital for antenatal care by pregnant women? The women have already recommended the employment of more staff, but there may be interim measures that could be

taken before that.

3. Teaching hospital nurses have already improved on the behavioural standards set by their predecessors but in what possible ways could bad behaviour be eradicated?
4. Why are drugs and equipment scarce in the hospital? Is the hospital given adequate budget for its services and if not, are there alternatives to solving such problems?

## Chapter 8

### Conclusion and suggestions for further research

This research set out to identify factors which determine women's choice between the use of TBA and hospital obstetric services. We did this by analyzing the 1990 NDHS data, interviewing 700 women in PH as well as service providers. In the course of this context we have discovered:

- (1) Dual utilization at a 1.5% national figure. (that is a combination of TBA and hospital services).
- (2) Observed that TBA takes 22.5% of national deliveries while 18.9% of women self deliver and other delivery types are at 26.5%.
- (3) The positive effect of education on the uptake of hospital obstetric services.
- (4) That dual utilization also exists within the modern hospital service and the TBA services independently. This refers to the same women registering with more than one TBA or hospital.
- (5) In view of the existence of dual utilization in both TBA and hospital services, we question the assertion of previous studies regarding the negative impact of high cost on service utilization. The multiple registrations were not associated to the existence of wealth.
- (6) We also discovered that cumulatively TBA services are more expensive than hospital services.
- (7) We challenge the perception that TBAs are a rural

phenomenon as they are a thriving business in PH.

- (8) We also refute the assertions of previous researchers that education would eradicate the use of TBA services. Our study discovered that nurses and PhD holders utilized TBA services. We rather suggest that education encourages dual utilization.
- (9) Similarly, we challenge the theories on availability and accessibility because our study was carried out in the city with hospital facilities where women continued to use TBA services.
- (10) We assert from the qualitative studies that massage is the most important reason for TBA patronage.

This study thus confirmed the use of TBA services from the 1990 NDHS data and the 1991/92 in-depth and qualitative studies and obtained reasons for such patronage behaviour. It established the level of acceptability and reasons for rejection of hospital services by pregnant women.

The analysis of the 1990 NDHS data indicated the existence of dual utilization. Births in the five-year period show that qualified medical personnel only conducted 30.0% of all deliveries. 52.0% and 48.0% of urban and rural women use hospital antenatal care in the NDHS respectively. When antenatal utilization in the national urban areas was considered, 2.0% of them utilized TBAs and 1.3% utilized the native/church/mission category. The national data

indicated that in the five year period, in urban areas, the TBA assisted in about 13.0% of all births in the nation, while the native/church/mission group also assisted in another 12.0% of births, and 13.0% delivered themselves. Thus cumulatively, this indicates that in the urban areas of Nigeria where hospital services exist 37.0% of births are conducted by non-medical personnel.

A multivariate analysis of the 1990 NDHS data indicated that antenatal care is influenced by education, rural residence, residence with husband, religion and radio usage. Current urban residence favours hospital services utilization while rural residence favours TBA services. Rural residence also favours self delivery. Secondary or higher education has a positive effect on hospital antenatal care utilization. Conversely women without any education were most likely to use TBA antenatal care.

The effect of religion was more significant than expected both on antenatal and delivery services. Moslem women had 56% lower odds to use TBA services for antenatal care than Christian women. Moslem women also had 340% higher odds of TBA delivery compared to Christian women than hospital delivery. They have 3373% higher odds of self delivery instead of hospital and 862% higher odds of self delivery instead of TBA delivery compared to Christian women. These effects are due to the restrictions of the 'Purdah' system

on social mobility as well as the provision of obstetric services by male practitioners in hospitals. It is thus a policy issue which government and health practitioners need to recognise.

Another finding from the 1990 NDHS is the effect of partners on the utilization of services. The presence of a partner has a negative effect on the uptake of TBA antenatal services. The absence of a partner, whether, not being resident, divorced, separated or widowed has a contrary effect, but not seen in choice of delivery care.

The uptake of TTI at the hospital is more likely if women are educated or married to men educated to at least secondary level, have access to radio, TV and live in the city. Younger women are more likely to have TTI than older women.

The anticipated effects of distance, cost, age, cultural beliefs, surgical intervention, previous experience, work or employment as anticipated are absent. The results for Rivers State were similar but with higher percentages.

The 1991 in-depth study in Port-Harcourt indicated that 37% of the women had visited a TBA prior to their current pregnancy while 27% of women were visiting in their current pregnancy. Reasons for TBA visits include massage, check-up



on the pregnancy, to cure infertility, to position the unborn baby, affective behaviour, distance and preference for TBA care. Reasons for attendance for previous pregnancies were similar. For antenatal care in PH urban, 30% practised dual utilization involving the TBA. 9% had other combinations of dual utilization, including private clinics. Only 0.2% of women did not use any form of antenatal care. There is evidence of switches from one pregnancy to another in five year period studied which favoured the TBA more than trained medical personnel.

Massage and TTI were excluded from the multivariate analysis because they clouded the analysis and were peculiar to each of the services. All the significant variables in the bivariate analysis were included in the multivariate analysis but only a few maintained their significance. There was an indication that for antenatal care, women's partner's influence inclined more to TBA service utilization than the hospital. This finding was not affected by education as education was not significant in the analysis. This would certainly be an area for further studies as men do not attend antenatal classes or delivery sessions of their babies. It is not clear if there are issues of empowering women to make these decisions themselves. It was also indicated that television usage and childhood urban residence positively influenced hospital usage, which is expected. However, rural childhood residence, long waiting

time at hospital, dislike for nurses' attitudes and previous dual utilization indicated a preference for TBA services or dual utilization.

For delivery, if a woman has not experienced a child's death, the likelihood of her having a TBA delivery service is increased. Similarly, if she was a dual utilizer, does not watch television, and her preferred delivery carer is a TBA or she was a sole TBA antenatal service utilizer then she is most likely to have a TBA delivery.

Women resounded the need for massage in pregnancy all through the study. Thus modern medical practice may consider the possibility of providing massage in its service either through the employment and continued training of TBAs or incorporate such training into physiotherapy or occupational therapy.

Other crucial issues stated by women through this study include long waiting hours, bad nurses attitudes, inadequate facilities and lack of drugs in hospitals. All these issues could be resolved through the propagation of adequate policies and implementation to improve service quality and encourage women to utilize acceptable maternal services to reduce maternal and infant mortality.

The reasons given by doctors on TBA utilization and non-use

of hospital services include ignorance, long term conditioned use of TBA services, accessibility of TBAs, encouragement by older women, and women's insecurity and gullible attitude. Doctors recognize and advocate the need to educate both pregnant women and TBAs regarding the dangers associated with TBA service provision. On dual utilization they say that some women have identified something useful in both services.

It is clear from the findings that neither the hospital, the TBA or a combination of their services adequately meet the needs of pregnant women. The women are desirous to secure their pregnancies and have safe deliveries. In their search, they run into problems, of which not one system or person can bear the blame or responsibility. The furtherance of the course of safe motherhood would have to lie in the hands of medical practitioners and policy makers. The women have cooperated by making their desires known.

Suggested areas of further research include:

- (1) A study of medical practitioners and educated women who use TBA services.
- (2) A study of nurses's attitudes in antenatal clinics and labour wards in hospitals.
- (3) A study of multiple registrations by pregnant women within TBA and hospital services utilization.
- (4) A case study of the effect of Caesarian sections on

hospital services utilization.

(5) The reasons and effects of late antenatal registrations by pregnant women.

(6) The effect of religion on obstetric services utilization.

(7) A study of dual utilizers of hospital and TBA services.

(8) The role of partner's in choice of obstetric service utilization.

(9) Understanding the myth of low cost TBA obstetric services.

(10) Understanding TBA referrals of patients to hospitals.

The provision of adequate antenatal and delivery service constitutes an important component of every government's policy. The policy issues that surround hospital practice need to be continually monitored by governments, be it in the area of budgetary allocations or training in health care. Adequate staffing levels and the burden of care placed on nurses may have impending pressures on service delivery. This research both in its' preliminary findings and through this thesis have presented governments with a unique opportunity of what providers and users desire in obstetric service provision. Perhaps the provision of massage services in hospitals may be a good starting point.

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**Questionnaire On The Determinants Of Utilization Of Obstetric Services By Nigerian Women - A Case Study Of Port-Harcourt, Nigeria**

IDENTIFICATION							
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<b>RESULT CODES :</b> 1 COMPLETED 2 HOUSEHOLD PRESENT BUT NO COMPETENT RESP. AT HOME 3 HOUSEHOLD ABSENT 4 POSTPONED 5 REFUSED 6 DWELLING VACANT OR ADDRESS NOT A DWELLING 7 DWELLING DESTROYED 8 DWELLING NOT FOUND 9 OTHER _____ (SPECIFY)				TOTAL IN HOUSEHOLD <input style="width: 40px;" type="text"/>  TOTAL ELIGIBLE WOMEN <input style="width: 40px;" type="text"/>															

NAME	FIELD EDITED BY	OFFICE EDITED BY	KEYED BY	KEYED BY
DATE	_____	_____	_____	<input style="width: 20px; height: 20px;" type="text"/>



13	Now I would like to ask some questions about you and your household. For most of the time until you were 12 years old, did you live in a city, in a town, or in the countryside?	CITY.....1 TOWN.....2 COUNTRYSIDE.....3	
14	How long have you been living continuously in Port-Harcourt? (ENTER 1 IN COL:1 OF CALENDAR IN MONTH OF INTERVIEW AND IN EACH PRECEDING MONTH RESIDENT IN CITY)	ALWAYS.....95 → 18 VISITOR.....96 YEARS..... <input type="text"/> <input type="text"/> → 18 (If LIVED IN PORT-HARCOURT BEFORE 1985)	
15	Just before you moved here, did you live in a city, in a town, or in the countryside? (ENTER 1, 2, OR 3 IN COL 1: FOR RESIDENCE BEFORE MOVE TO PORT-HARCOURT)	CITY.....1 TOWN.....2 COUNTRYSIDE.....3	
16	How long did you live there? (ENTER 1 IN EACH MONTH RESIDENT IN CITY ENTER 2 IN EACH MONTH RESIDENT IN TOWN ENTER 3 IN EACH MONTH RESIDENT IN COUNTRYSIDE)	MONTHS <input type="text"/> <input type="text"/> YEARS <input type="text"/> <input type="text"/> (IF BEFORE JAN 1985) → 18	
17	And before you moved to (location given in 16), did you live in a city, a town or the countryside? (ENTER 1,2 OR 3 IN EACH MONTH FOR PREVIOUS RESIDENCE. CONTINUE TO PROBE FOR LOCATIONS OF RESIDENCE FOR EACH MONTH BACK TO JAN 1985)	MONTHS <input type="text"/> <input type="text"/> YEARS <input type="text"/> <input type="text"/> (IF BEFORE JAN 1985) → 18	

REPRODUCTION

NO	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
18	Now I would like to ask about all the births you have had during your life. Have you ever given birth?	YES.....1 NO.....2 → 23	
19	Do you have any sons or daughters to whom you have given birth who are now living with you?	YES.....1 NO.....2 → 21	
20	How many sons live with you? and how many daughters live with you? IF NONE ENTER '00'	SONS AT HOME <input type="text"/> <input type="text"/> DAUGHTERS AT HOME <input type="text"/> <input type="text"/>	
21	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES.....1 NO.....2 → 23	

22	How many sons are alive but do not live with you? and how many daughters are alive but do not live with you? IF NONE ENTER 'OO'.	SONS ELSEWHERE..... <input type="checkbox"/> <input type="checkbox"/> DAUGHTERS ELSEWHERE..... <input type="checkbox"/> <input type="checkbox"/>		
23	Have you ever given birth to a boy or a girl? who was born alive but later died? IF NO, PROBE: Any (other) baby who cried or showed any sign of life but only survived a few hours or days.	YES.....1 NO.....2 → 25		
24	In all, how many boys have died? and how many girls have died? IF NONE ENTER 'OO'.	BOYS DEAD..... <input type="checkbox"/> <input type="checkbox"/> GIRLS DEAD..... <input type="checkbox"/> <input type="checkbox"/>		
25	SUM ANSWERS TO 20,22,AND 24,AND ENTER TOTAL IF NONE ENTER 'OO'.	TOTAL..... <input type="checkbox"/> <input type="checkbox"/>		
26	Have you visited a TBA before/after any of your pregnancies?	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2 → 28
27	Please state for what purpose			
28	CHECK 25 : Just to make sure that I had this right: you have had in TOTAL _____ live births during your life. Is that correct? YES <input type="checkbox"/> NO <input type="checkbox"/> → PROBE AND CORRECT 17-25 AS NECESSARY			
29	CHECK 25 ONE OR MORE BIRTHS <input type="checkbox"/> → 30 NO BIRTHS <input type="checkbox"/> → 41			



30 Now I would like to talk to you about all of your births, whether still alive or not, starting with the first one you had.

(RECORD NAMES OF ALL THE BIRTHS IN 31. RECORD TWINS & TRIPLETS ON SEPERATE LINES)

31 What name was given to your (first baby?	32 RECORD SINGLE OR MULTIPLE BIRTHS	33 IS (NAME) a boy or girl?	34 In what month and year was (NAME) born?	35 Is (NAME) still alive?	36 IF ALIVE How old was (NAME) AT his/her birth-day RECORD AGE IN COMPLETED YEARS	37 IF ALIVE Is (NAME) living with you?	38 If Less than 15YRS OF AGE With whom does he/she live? If 15+ GO TO NEXT BIRTH	39 IF DEAD: How old was he/she when he/she died? IF "1YR" PROBE: How many months was (NAME) RECORD DAYS IF LESS THAN 1 MONTH, MONTHS IF LESS THAN 2YRS
01 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL..2	MON YR. <input type="text"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS <input type="text"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN..2 OTHER..3  GO TO NEXT BIRTH	DAYS..1 MON..2 YR..3 <input type="text"/>
02 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL..2	MON YR. <input type="text"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS <input type="text"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN..2 OTHER..3  GO TO NEXT BIRTH	DAYS..1 MON..2 YR..3 <input type="text"/>
03 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL..2	MON YR. <input type="text"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS <input type="text"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN..2 OTHER..3  GO TO NEXT BIRTH	DAYS..1 MON..2 YR..3 <input type="text"/>
04 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL..2	MON YR. <input type="text"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS <input type="text"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN..2 OTHER..3  GO TO NEXT BIRTH	DAYS..1 MON..2 YR..3 <input type="text"/>
05 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL..2	MON YR. <input type="text"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS <input type="text"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN..2 OTHER..3  GO TO NEXT BIRTH	DAYS..1 MON..2 YR..3 <input type="text"/>

06 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
07 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
08 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
09 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
10 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
11 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
12 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
13 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>
14 <hr/> (NAME)	SING..1 MULT..2	BOY..1 GIRL.2	MON YR. <input type="checkbox"/>	YES..1 NO...2 ↓ 39	AGE IN YEARS  <input type="checkbox"/>	YES..1 NEXT BIRTH NO..2	DAD..1 RELN.2 OTHER.3  GO TO NEXT BIRTH	DAYS.1 MON..2 YR..3 <input type="checkbox"/>

40	<p>COMPARE 25 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND MARK NUMBERS ARE SAME <input type="checkbox"/> NUMBERS ARE DIFFERENT <input type="checkbox"/> (PROBE AND RECONCILE)</p> <p>CHECK: FOR EACH LIVE BIRTH: YEAR OF BIRTH IS RECORDED  FOR EACH LIVING CHILD: CURRENT AGE IS RECORDED  FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED  FOR AGE AT DEATH 12 MONTHS: PROBE TO DETERMINE EACH NUMBER OF MONTHS</p>
41	<p>CHECK 34 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 1985 IF NONE, ENTER 0. FOR EACH LIVE BIRTH SINCE 1985, ENTER 'B' IN COLUMN 2 OF CALENDAR IN MONTH OF BIRTH, AND 'P' IN EACH PRECEDING MONTH PREGNANT. <input type="checkbox"/></p>
42	<p>Are you pregnant now?</p> <p>YES.....1  NO.....2  UNSURE.....8 → 44</p>
43	<p>How many months pregnant are you? MONTHS..... <input type="text"/> <input type="text"/></p> <p>ENTER "P" IN COLUMN 2 OF CALENDAR IN MONTH OF INTERVIEW AND IN EACH PRECEDING MONTH PREGNANT</p>
44	<p>Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth?</p> <p>YES.....1  NO.....2 → 51</p>
45	<p>When did the last such pregnancy end?</p> <p>MONTH..... <input type="text"/> <input type="text"/>  YEAR..... <input type="text"/> <input type="text"/></p>
46	<p>CHECK 45:  DATE LAST PREGNANCY ENDED SINCE JANUARY 1985 <input type="text"/> BEFORE JANUARY 1985 <input type="text"/> → 50</p>
47	<p>How many months pregnant were you when the pregnancy ended? MONTHS..... <input type="text"/> <input type="text"/></p> <p>ENTER "T" IN COLUMN 1 OF CALENDAR IN MONTH PREGNANCY TERMINATED, AND "P" IN EACH PRECEDING MONTH PREGNANT.</p>
48	<p>Did you have any other such pregnancies?</p> <p>YES.....1  NO.....2 → 50</p>
49	<p>ASK FOR DATES AND DURATIONS OF ANY OTHER PREGNANCIES BACK TO JANUARY 1985.  ENTER "T" IN COLUMN 2 OF CALENDAR IN MONTH PREGNANCY TERMINATED, AND "P" IN EACH PRECEDING MONTH PREGNANT.</p>

50	Who treated you for such miscarriages?	DOCTOR.....1 MIDWIFE.....2 TBA.....3 PRIVATE CLINIC...4 RELATIVE.....5 OTHER.....6 (SPECIFY)	DOCTOR.....1 MIDWIFE.....2 TBA.....3 PRIV. CLINIC...4 RELATIVE.....5 OTHER.....6 (SPECIFY)	DOCTOR.....1 MIDWIFE.....2 TBA.....3 PRIV. CLINIC..4 RELATIVE.....5 OTHER.....6 (SPECIFY)
51	When you were pregnant with (NAME), did you see anyone for antenatal care for this pregnancy?  IF YES, whom did you see? anyone else? PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS SEEN (ASK FOR EACH BIRTH SINCE 1985)	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SPECIFY) NO ONE.....8 (SKIP TO 53)←	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SECIFY) NO ONE.....8 (SKIP TO 53)←	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SPECIFY) NO ONE.....8 (SKIP TO 53)←
	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SPECIFY) NO ONE.....8 (SKIP TO 53)←	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SECIFY) NO ONE.....8 (SKIP TO 53)←	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SPECIFY) NO ONE.....8 (SKIP TO 53)←	DOCTOR.....1 NURSE/MIDWIFE.....2 AUXILIARY MIDWIFE.....3  TRAINED TBA.....4  TBA.....5  PRIVATE CLINIC.....6  OTHER.....7 (SPECIFY) NO ONE.....8 (SKIP TO 53)←
52	Did your husband/partner influence your decision of patronage? (ASK FOR ALL PREGNANCIES SINCE 1985)	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2

	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2
53	In what sequence did you see the persons for antenatal care? (ASK FOR ALL PREGNANCIES SINCE 1985)	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....
	1 PERSON..... 2 PERSON..... 3 PERSON..... 4 PERSON.....	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....	1 <sup>st</sup> PERSON..... 2 <sup>nd</sup> PERSON..... 3 <sup>rd</sup> PERSON..... 4 <sup>th</sup> PERSON.....
54	Why did you see them in the order stated above?			
	Why did you see them in the order stated above?			
	Why did you see them in the order stated above?			
	Why did you see them in the order stated above?			

	Why did you see them in the order stated above?				
	Why did you see them in the order stated above?				
	Why did you see them in the order stated above?				
55	Amongst those seen, which care do you prefer?			DOCTOR.....1 NURSE / MIDWIFE.....2 AUXILIARY MIDWIFE.....3 TRAINED TBA....4 TBA.....5 PRIVATE CLINIC.....6 OTHER _____7 (SPECIFY)	
56	How many months pregnant were you when you first saw someone for antenatal check on this pregnancy? (ASK FOR ALL PREGNANCIES FROM 1985)	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98
	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98	MONTHS..... <input type="text"/> <input type="text"/> DK.....98		

57	Were you given an antenatal card for this pregnancy? (ASK FOR ALL PREGNANCIES FROM 1985)	YES.....1 NO.....2 DK.....8	YES.....1 NO.....2 DK.....8	YES.....1 NO.....2 DK.....8	YES.....1 NO.....2 DK.....8
	YES.....1 NO.....2 DK.....8	YES.....1 NO.....2 DK.....8	YES.....1 NO.....2 DK.....8		
58	How many antenatal visits did you have during that pregnancy. (ASK FOR ALL PREGNANCIES SINCE 1985)	TIMES..... <input type="text"/> <input type="text"/> DK.....98	TIMES..... <input type="text"/> <input type="text"/> DK.....98	TIMES... .. <input type="text"/> <input type="text"/> DK.....98	TIMES..... <input type="text"/> <input type="text"/> DK.....98
	TIMES..... <input type="text"/> <input type="text"/> DK.....98	TIMES..... <input type="text"/> <input type="text"/> DK.....98	TIMES..... <input type="text"/> <input type="text"/> DK.....98		
59	When you were pregnant with (NAME) were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth? (ASK FOR ALL PREGNANCIES SINCE 1985)	YES.....1 NO.....2 (SKIP TO 61)← DK.....8	YES.....1 NO.....2 (SKIP TO 61)← DK.....8	YES.....1 NO.....2 (SKIP TO 61)← DK.....8	YES.....1 NO.....2 (SKIP TO 61)← DK.....8

	YES.....1  NO.....2 (SKIP TO 61)← DK.....8	YES.....1  NO.....2 (SKIP TO 61)← DK.....8	YES.....1  NO.....2 (SKIP TO 61)← DK.....8		
60	How many times did you get this injection? (ASK FOR-ALL PREGNANCIES SINCE 1985)	TIMES.... <input type="checkbox"/> DK.....8	TIMES.... <input type="checkbox"/> DK.....8	TIMES.... <input type="checkbox"/> DK.....8	TIMES.... <input type="checkbox"/> DK.....8
	TIMES... <input type="checkbox"/> DK.....8	TIMES.... <input type="checkbox"/> DK.....8	TIMES... <input type="checkbox"/> DK.....8		
61	Which services do you require that are not available at the TBAs but are present at the hospital ALLOW SPONTANEOUS RESPONSE FIRST AND RECORD HERE BEFORE READING OUT CATEGORIES.	TETANUS TOXOID INJECTION..... <input type="checkbox"/> CAESERAN SECTION..... <input type="checkbox"/> MULTIVITE DRUGS..... <input type="checkbox"/> MATERNITY LEAVE..... <input type="checkbox"/> BEDS AND COTS..... <input type="checkbox"/> HERBS..... <input type="checkbox"/> DRIP..... <input type="checkbox"/> OTHER..... (SPECIFY)..... <input type="checkbox"/>			
62	Which services do you require that are not available at the hospital but are present at the TBA ALLOW SPONTANEOUS RESPONSE FIRST AND RECORD HERE BEFORE READING OUT CATEGORIES.	MULTIVITE DRUGS..... <input type="checkbox"/> MASSAGE AND HOT BATH..... <input type="checkbox"/> BEDS AND COTS..... <input type="checkbox"/> HERBS..... <input type="checkbox"/> OTHER..... (SPECIFY)..... <input type="checkbox"/>			



63	Have you ever been referred to the hospital by the TBA?	YES.....1 NO.....2	→ 65
64	If yes, what condition made the referral necessary?		
65	<p>How would you describe the attitude of nurses in the hospital?</p> <p>Friendly 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Unfriendly</p> <p>Kind 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Cruel &amp; Harsh</p> <p>Helpful &amp; Dependable 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Indifferent</p> <p>Other _____ (SPECIFY)</p>		
66	<p>How would you describe the attitude of doctors in the hospital?</p> <p>Friendly 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Unfriendly</p> <p>Kind 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Cruel &amp; Harsh</p> <p>Helpful &amp; Dependable 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Indifferent</p> <p>Other _____ (SPECIFY)</p>		
67	<p>How would you describe the attitude of TBAs in their practice?</p> <p>Friendly 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Unfriendly</p> <p>Kind 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Cruel &amp; Harsh</p> <p>Helpful &amp; Dependable 5 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Indifferent</p> <p>Other _____ (SPECIFY)</p>		

68 How would you describe the services provided in the hospital?

Efficient 5      Inefficient

Uncorrupt 5      Corrupt

Effective & Dependable 5      Ineffective & Unreliable

Other \_\_\_\_\_

(SPECIFY)

69 How would you describe the services provided by the TBA?

Efficient 5      Inefficient

Uncorrupt 5      Corrupt

Effective & Dependable 5      Ineffective & Unreliable

Other \_\_\_\_\_

(SPECIFY)

70 Where did you give birth to (NAME)? (ASK FOR BIRTHS SINCE 1985)

YOUR HOME.....1	YOUR HOME.....1	YOUR HOME.....1
OTHER HOME....2	OTHER HOME....2	OTHER HOME....2
HEALTH POST...3	HEALTH POST...3	HEALTH POST...3
CLINIC.....4	CLINIC.....4	CLINIC.....4
HEALTH CENT...5	HEALTH CENT...5	HEALTH CENT...5
HOSPITAL.....6	HOSPITAL.....6	HOSPITAL.....6
TBA.....7	TBA.....7	TBA.....7
OTHER _____8 (SPECIFY)	OTHER _____8 (SPECIFY)	OTHER _____8 (SPECIFY)

YOUR HOME.....1	YOUR HOME.....1	YOUR HOME.....1	YOUR HOME.....1
OTHER HOME....2	OTHER HOME....2	OTHER HOME....2	OTHER HOME....2
HEALTH POST...3	HEALTH POST...3	HEALTH POST...3	HEALTH POST...3
CLINIC.....4	CLINIC.....4	CLINIC.....4	CLINIC.....4
HEALTH CENT...5	HEALTH CENT...5	HEALTH CENT...5	HEALTH CENT...5
HOSPITAL.....6	HOSPITAL.....6	HOSPITAL.....6	HOSPITAL.....6
TBA.....7	TBA.....7	TBA.....7	TBA.....7
OTHER (SPECIFY) .8	OTHER (SPECIFY) .8	OTHER (SPECIFY) .8	OTHER (SPECIFY) .8

71 Who assisted with the delivery of (NAME)?

PROBE FOR THE TYPE OF PERSON AND RECORD ALL PERSONS ASSISTING (ASK FOR BIRTHS SINCE 1985)

DOCTOR.....1	DOCTOR.....1	DOCTOR.....1
NURSE/MIDWIFE.....2	NURSE/MIDWIFE.....2	NURSE/MIDWIFE.....2
AUXILIARY MIDWIFE.....3	AUXILIARY MIDWIFE.....3	AUXILIARY MIDWIFE.....3
TRAINED TBA.....4	TRAINED TBA.....4	TRAINED TBA.....4
TBA.....5	TBA.....5	TBA.....5
PRIVATE CLINIC.....6	PRIVATE CLINIC.....6	PRIVATE CLINIC.....6
OTHER _____7 (SPECIFY)	OTHER _____7 (SPECIFY)	OTHER _____7 (SPECIFY)
NO ONE.....8	NO ONE.....8	NO ONE.....8

71 D-202	DOCTOR.....1	DOCTOR.....1	DOCTOR.....1	DOCTOR.....1
	NURSE/ MIDWIFE.....1	NURSE/ MIDWIFE.....1	NURSE/ MIDWIFE.....1	NURSE/ MIDWIFE.....1
	AUXILIARY MIDWIFE.....1	AUXILIARY MIDWIFE.....1	AUXILIARY MIDWIFE.....1	AUXILIARY MIDWIFE.....1
	TRAINED TBA.....1	TRAINED TBA.....1	TRAINED TBA.....1	TRAINED TBA.....1
	TBA.....1	TBA.....1	TBA.....1	TBA.....1
PRIVATE CLINIC.....1	PRIVATE CLINIC.....1	PRIVATE CLINIC.....1	PRIVATE CLINIC.....1	
OTHER.....1 (SPECIFY)	OTHER.....1 (SPECIFY)	OTHER.....1 (SPECIFY)	OTHER.....1 (SPECIFY)	
NO ONE.....1	NO ONE.....1	NO ONE.....1	NO ONE.....1	
72	Why did you deliver (NAME) there? (ASK FOR BIRTHS SINCE 1985)	PREVIOUS EXPERIENCE.....1	PREVIOUS EXPERIENCE.....1	PREVIOUS EXPERIENCE.....1
		HUSBAND'S ADVICE.....2	HUSBAND'S ADVICE.....2	HUSBAND'S ADVICE.....2
		MOTHER'S ADVICE.....3	MOTHER'S ADVICE.....3	MOTHER'S ADVICE.....3
		FRIEND'S ADVICE.....4	FRIEND'S ADVICE.....4	FRIEND'S ADVICE.....4
		QUALITY OF CARE.....5	QUALITY OF CARE.....5	QUALITY OF CARE.....5
		REPUTATION.....6	REPUTATION.....6	REPUTATION.....6
		TECHNICAL BIRTH.....7	TECHNICAL BIRTH.....7	TECHNICAL BIRTH.....7
		COST.....8	COST.....8	COST.....8
		DISTANCE.....9	DISTANCE.....9	DISTANCE.....9
		OTHER.....10 (SPECIFY)	OTHER.....10 (SPECIFY)	OTHER.....10 (SPECIFY)
		PREVIOUS EXPERIENCE.....1	PREVIOUS EXPERIENCE.....1	PREVIOUS EXPERIENCE.....1
		HUSBAND'S ADVICE.....2	HUSBAND'S ADVICE.....2	HUSBAND'S ADVICE.....2
		MOTHER'S ADVICE.....3	MOTHER'S ADVICE.....3	MOTHER'S ADVICE.....3
		FRIEND'S ADVICE.....4	FRIEND'S ADVICE.....4	FRIEND'S ADVICE.....4
		QUALITY OF CARE.....5	QUALITY OF CARE.....5	QUALITY OF CARE.....5
		REPUTATION.....6	REPUTATION.....6	REPUTATION.....6
		TECHNICAL BIRTH.....7	TECHNICAL BIRTH.....7	TECHNICAL BIRTH.....7
		COST.....8	COST.....8	COST.....8
		DISTANCE.....9	DISTANCE.....9	DISTANCE.....9
		OTHER.....10 (SPECIFY)	OTHER.....10 (SPECIFY)	OTHER.....10 (SPECIFY)

73	Was (NAME) born on time or prematurely? (ASK FOR BIRTHS SINCE 1985)	ON TIME.....1 PREMATURELY...2 DK.....8	ON TIME.....1 PREMATURELY...2 DK.....8	ON TIME.....1 PREMATURELY...2 DK.....8	
	ON TIME.....1 PREMATURELY...2 DK.....8	ON TIME.....1 PREMATURELY...2 DK.....8	ON TIME.....1 PREMATURELY...2 DK.....8	ON TIME.....1 PREMATURELY...2 DK.....8	
74	Was (NAME) delivered by caesarean section? (ASK FOR BIRTHS SINCE 1985)	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	
	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	YES.....1 NO.....2	

75	Where would you like to have your next babies?	YOUR HOME.....1 OTHER HOME.....2 HEALTH POST.....3 CLINIC.....4 HEALTH CENT.....5 HOSPITAL.....6 TBA.....7 OTHER (SPECIFY).....8	
76	How far away is the TBA from your home?	UNDER A KILOMETRE.....1 ABOUT TWO KILOMETRES.....2 ABOVE THREE KILOMETRES.....3	
77	How far away is the hospital from your home?	UNDER A KILOMETRE.....1 ABOUT TWO KILOMETRES.....2 ABOVE THREE KILOMETRES.....3	
78	Does distance partly influence which service you use?	YES.....1 NO.....2	
79	How long does it take for you to be attended for antenatal check up at the hospital as a pregnant woman?	UNDER THIRTY MINUTES.....1 ONE HOUR.....2 TWO HOURS.....3 THREE HOURS.....4 ABOVE FOUR HOURS.....5	
80	How long does it take for you to be attended for antenatal check up at the TBA's, as a pregnant woman?	UNDER THIRTY MINUTES.....1 ONE HOUR.....2 TWO HOURS.....3 THREE HOURS.....4 ABOVE FOUR HOURS.....5	
81	What do you dislike most about the TBA? (ALLOW SPONTANEOUS RESPONSE BEFORE READING OUT CATEGORIES AND RECORD RESPONSE HERE).	LACK OF STANDARDIZED DRUGS.....1 DIRTY ENVIRONMENT.....2 NON-USE OF GLOVES.....3 NON-USE OF BEDS AND COTS.....4 (PLEASE ORDER DISLIKE HERE) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OTHER _____ (SPECIFY)	

82	<p>What do you dislike most about the hospital?</p> <p>(ALLOW SPONTANEOUS RESPONSE FIRST BEFORE READING OUT CATEGORIES. RECORD SPONTANEOUS RESPONSES HERE).</p>	<p>NURSES BAD ATTITUDE.....1  NO DRUGS.....2  LACK OF FACILITIES.....3  CAESARIAN SECTION.....4  LONG WAITING HOURS.....5  BUREACRACY AND IMPERSONALITY.....6  TIMES CLINICS ARE OPEN.....7  COST OF ANTENATAL CARE.....8  BRIBERY.....9  PREFERENTIAL TREATMENT.....10</p> <p>(PLEASE ORDER DISLIKE BELOW)</p> <table border="1" style="width:100%; height:20px; border-collapse: collapse;"> <tr> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> <td style="width:10%;"></td> </tr> </table> <p>OTHER _____  (SPECIFY)</p>																																									
83	What would you recommend to improve the hospital system?																																										
84	What would you recommend to improve the TBA service?																																										
85	<p>Please tell me if (NAME) (has) recieved any of the following vaccinations:  BCG,  Polio vaccine,  IF YES:  How many times?  An injection against measles?  (FOR ALL BIRTHS SINCE 1985)</p>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align:center;">BCG</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td style="text-align:center;">POLIO</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td>NUMBER OF TIMES..... <input type="text"/></td></tr> <tr><td style="text-align:center;">MEASLES</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> </table>	BCG	YES.....1	NO.....2	DK.....8	POLIO	YES.....1	NO.....2	DK.....8	NUMBER OF TIMES..... <input type="text"/>	MEASLES	YES.....1	NO.....2	DK.....8	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align:center;">BCG</td></tr> <tr><td>YES.....1</td></tr> <tr><td>YES.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td style="text-align:center;">POLIO</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td>NUMBER OF TIMES..... <input type="text"/></td></tr> <tr><td style="text-align:center;">MEASLES</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> </table>	BCG	YES.....1	YES.....2	DK.....8	POLIO	YES.....1	NO.....2	DK.....8	NUMBER OF TIMES..... <input type="text"/>	MEASLES	YES.....1	NO.....2	DK.....8	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="text-align:center;">BCG</td></tr> <tr><td>YES.....1</td></tr> <tr><td>YES.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td style="text-align:center;">POLIO</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> <tr><td>NUMBER OF TIMES..... <input type="text"/></td></tr> <tr><td style="text-align:center;">MEASLES</td></tr> <tr><td>YES.....1</td></tr> <tr><td>NO.....2</td></tr> <tr><td>DK.....8</td></tr> </table>	BCG	YES.....1	YES.....2	DK.....8	POLIO	YES.....1	NO.....2	DK.....8	NUMBER OF TIMES..... <input type="text"/>	MEASLES	YES.....1	NO.....2	DK.....8
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HIGHER.....3	HIGHER.....3	HIGHER.....3	HIGHER.....3
DK.....8 ↓ 106	DK.....8 ↓ 106	DK.....8 ↓ 106	DK.....8 ↓ 106

104 What was the highest grade (GRADE, FORM, YEAR) he completed at that level? (RECORD RESPONSE FOR ALL PARTNERS SINCE 1985)	GRADE.. <input type="text"/> <input type="text"/>	GRADE... <input type="text"/> <input type="text"/>	GRADE... <input type="text"/> <input type="text"/>
	DK.....	DK.....	DK.....

GRADE... <input type="text"/> <input type="text"/>	GRADE.. <input type="text"/> <input type="text"/>	GRADE... <input type="text"/> <input type="text"/>	GRADE... <input type="text"/> <input type="text"/>
DK.....	DK.....	DK.....	DK.....

105 CHECK 86-87 IF CURRENTLY IN UNION ↓ 106	IF NOT CURRENTLY IN UNION ↓ ENTER X IN COLUMN 4 FOR EACH MONTH NOT IN UNION
--	---

106 What is or was your partner's occupation? (CODE IN COLUMN 4 AS APPROPRIATE. ASK FOR ALL RELATIONSHIPS FROM 1985 TO DATE).	UNEMPLOYED....0	UNEMPLOYED.....0	UNEMPLOYED.....0
	MANUAL WORKER.....1	MANUAL WORKER.....1	MANUAL WORKER.....1
	BUSINESS MAN.....2	BUSINESS MAN.....2	BUSINESS MAN.....2
	CIVIL SERVANT.....3	CIVIL SERVANT.....3	CIVIL SERVANT.....3
	PUBLIC SERVANT.....4	PUBLIC SERVANT.....4	PUBLIC SERVANT.....4
	NOT IN UNION.....X	NOT IN UNION.....X	NOT IN UNION.....X
	IN AGRICULTURE...5	IN AGRICULTURE....5	IN AGRICULTURE....5
	OTHER (SPECIFY)...6	OTHER (SPECIFY)...6	OTHER (SPECIFY)...6

	UNEMPLOYED.....0 MANUAL WORKER.....1 BUSINESS MAN.....2 CIVIL SERVANT.....3 PUBLIC SERVANT.....4 NOT IN UNION.....X IN AGRICULTURE....5 OTHER (SPECIFY) .6	UNEMPLOYED.....0 MANUAL WORKER.....1 BUSINESS MAN.....2 CIVIL SERVANT.....3 PUBLIC SERVANT.....4 NOT IN UNION.....X IN AGRICULTURE....5 OTHER (SPECIFY) .6	UNEMPLOYED.....0 MANUAL WORKER.....1 BUSINESS MAN.....2 CIVIL SERVANT.....3 PUBLIC SERVANT.....4 NOT IN UNION.....X IN AGRICULTURE....5 OTHER (SPECIFY) .6	UNEMPLOYED.....0 MANUAL WORKER.....1 BUSINESS MAN.....2 CIVIL SERVANT.....3 PUBLIC SERVANT.....4 NOT IN UNION.....X IN AGRICULTURE....5 OTHER (SPECIFY) .6
107	Which income group did or does your husband/partner belong since 1985 (INCOME PER ANNUM)	BELOW N3,000.....1 BETWEEN N3,100 & N4,500.....2 BETWEEN N4,600 & N6,500.....3 BETWEEN N6,600 & N8,500.....4 BETWEEN N8,600 & N12,000.....5 ABOVE N12,000.....6	BELOW N3,000.....1 BETWEEN N3,100 & N4,500.....2 BETWEEN N4,600 & N6,500.....3 BETWEEN N6,600 & N8,500.....4 BETWEEN N8,600 & N12,000.....5 ABOVE N12,000.....6	BELOW N3,000.....1 BETWEEN N3,100 & N4,500.....2 BETWEEN N4,600 & N6,500.....3 BETWEEN N6,600 & N8,500.....4 BETWEEN N8,600 & N12,000.....5 ABOVE N12,000.....6
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108	As you know, many women work- I mean aside from doing their own housework. Some take up jobs which they are paid in cash or kind. Others sell things, have a small business or work on the family farm or in the family business. Are you currently doing any such work?	YES.....1 → 111 NO.....2 → 109		



114	Do you or did you earn cash for the work? (ASK FOR TYPE OF WORK SINCE 1985)	YES . . . . .1 NO . . . . .2	YES . . . . .1 NO . . . . .2	YES . . . . .1 NO . . . . .2
		YES . . . . .1 NO . . . . .2	YES . . . . .1 NO . . . . .2	YES . . . . .1 NO . . . . .2
115	Which income group do or did your earnings fall in? (INCOME PER ANNUM). (ASK FOR EARNINGS SINCE 1985).	BELOW \$3,000 . . . . .1 BETWEEN \$4,500 & . . . . .2 BETWEEN \$6,500 & . . . . .3 BETWEEN \$8,500 & . . . . .4 BETWEEN \$12,000 & . . . . .5 ABOVE \$12,000 . . . . .6	BELOW \$3,000 . . . . .1 BETWEEN \$4,500 & . . . . .2 BETWEEN \$6,500 & . . . . .3 BETWEEN \$8,500 & . . . . .4 BETWEEN \$12,000 & . . . . .5 ABOVE \$12,000 . . . . .6	BELOW \$3,000 . . . . .1 BETWEEN \$4,500 & . . . . .2 BETWEEN \$6,500 & . . . . .3 BETWEEN \$8,500 & . . . . .4 BETWEEN \$12,000 & . . . . .5 ABOVE \$12,000 . . . . .6
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116	Do or did you do the work at home or away from home?	HOME . . . . .1 AWAY . . . . .2	HOME . . . . .1 AWAY . . . . .2	HOME . . . . .1 AWAY . . . . .2
		HOME . . . . .1 AWAY . . . . .2	HOME . . . . .1 AWAY . . . . .2	HOME . . . . .1 AWAY . . . . .2
117	CHECK 112-116 ENTER APPROPRIATE CODE IN COL 5 OF CALENDAR FOR LAST MONTH OF WORK.			



## Appendix 2

### INTERVIEW SCHEDULE FOR TBAS IN THE CITY OF PORT-HARCOURT

1. NAME : (OPTIONAL) CODE
2. AGE :
3. SEX :
4. MARITAL STATUS :
5. NO. OF CHILDREN :
6. RELIGION :
7. ADDRESS :
8. HOW DID YOU LEARN TO BE A TBA ?
9. WHY ARE YOU A TBA ?
10. ARE YOU TEACHING SOMEONE TO BE A TBA ?
11. HOW LONG WOULD IT TAKE THE PERSON TO LEARN ?

12. CAN YOU READ OR WRITE ?

13. HAVE YOU BEEN INVOLVED IN THE TRAINING PROGRAMME BY GOVERNMENT ?

14. IF YES, WERE YOU GIVEN A KIT TO USE FOR DELIVERIES ?

15. ARE YOU STILL USING THE KIT ?

16. HAS IT EVER BEEN REPLACED ?

17. HOW LONG HAVE YOU BEEN DELIVERING BABIES ?

18. HOW MANY BABIES DO YOU DELIVER IN THE MONTH ?

19. PLEASE CAN YOU DESCRIBE YOUR JOB (DELIVERING OF BABIES) TO ME ?

20. HOW DO YOU KNOW WHEN TRUE LABOUR STARTS ?

21. IN WHAT POSITION DOES A WOMAN NORMALLY DELIVER ?

22. WHY DO YOU USE THIS POSITION ?

23. DO YOU GIVE ANY MEDICINES DURING LABOUR ?

24. WHAT MEDICINES DO YOU GIVE ?

25. DO YOU MASSAGE WOMEN ?

26. WHAT IS THE USE OF SUCH MESSAGES ?

27. DO YOU BATHE WOMEN AFTER DELIVERY ?



28. DO YOU REPORT THE DELIVERIES TO ANYONE ?
29. WHERE DO YOU CONDUCT THESE DELIVERIES ?
30. DO YOU GO TO DELIVER WOMEN IN THEIR HOMES ?
31. WHICH DO WOMEN PREFER, TO DELIVER IN YOUR PLACE OR IN THEIR HOMES ?
32. WHY ?
33. IF YOU DELIVER A WOMAN IN HER HOME, HOW LONG AFTER DELIVERY DO YOU REMAIN WITH HER ?
34. DURING DELIVERY DO YOU ALLOW THE HUSBAND TO STAY ?
35. PLEASE GIVE REASON FOR YOUR ANSWER TO QUESTION 34.

36. DO YOU VISIT WOMEN IN THEIR HOMES AFTER THEY HAVE DELIVERED ?

37. IF YES, HOW OFTEN DO YOU VISIT EACH MOTHER ?

38. WHICH AREAS DO THE WOMEN YOU DELIVER LIVE IN ?

39. ARE YOU PAID FOR YOUR SERVICES ?

40. HOW MUCH DO YOU CHARGE ?

41. HOW MANY DEATHS DO YOU EXPERIENCE IN THE MONTH ?

42. PLEASE COULD YOU SPECIFY DEATHS FOR MOTHERS AND CHILDREN.

43. DO YOU REPORT THESE DEATHS TO ANYONE ?

44. HAVE YOU EVER HEARD OF FAMILY PLANNING ?
45. DO WOMEN COME TO SEE YOU IF THEY THINK THEY ARE PREGNANT ?
46. IF A WOMAN WANTS TO BECOME PREGNANT BUT CAN NOT, CAN YOU DO ANYTHING TO HELP HER GET PREGNANT ?
47. WHY DO SOME WOMEN FIND IT DIFFICULT TO BECOME PREGNANT ?
48. DO YOU SOMETIMES REFER YOUR PATIENTS TO OTHER PROFESSIONALS SUCH AS OTHER TBAS, HERBALISTS, MIDWIVES OR THE HOSPITALS ?
49. IF YES, WHICH ONE DO YOU USE MOST OFTEN ?
50. WHAT CONDITIONS NORMALLY LEAD TO SUCH REFERRALS ?

51. WHY DO SOME WOMEN SEEK YOUR SERVICES INSTEAD OF THE SERVICES  
OF THE HOSPITAL ?

Appendix 3

INTERVIEW SCHEDULE FOR NURSE/MID-WIVES AND  
MIDWIVES IN ANTENATAL CLINICS

1. NAME : (OPTIONAL)

CODE

2. AGE :

3. MARITAL STATUS :

4. WHAT IS YOUR QUALIFICATION ?

5. WHEN DID YOU QUALIFY ?

6. HOW LONG HAVE YOU WORKED WITH PREGNANT WOMEN ?

7. AT WHAT STAGE OF PREGNANCY ARE WOMEN EXPECTED TO BOOK FOR  
ANTENATAL SERVICE ?

8. FROM YOUR EXPERIENCE WHAT IS THE COMMONEST AGE OF PREGNANCY IN WHICH WOMEN COME TO BOOK ?

9. HOW MUCH ARE THEY REQUIRED TO PAY FOR BOOKING ?

10. DO WOMEN FIND THIS AMOUNT CONVENIENT ?

11. IF A WOMAN DOES NOT TURN UP FOR A BOOKED APPOINTMENT IS THERE ANY WAY OF FINDING OUT ?

12. IS THERE ANYTHING DONE TO FIND OUT WHY SHE DID NOT SHOW UP ?

13. DO ALL THE WOMEN WHO BOOK WITH YOU DELIVER THEIR BABIES IN THE HOSPITAL ?

14. WHAT PERCENTAGE DO NOT DELIVER IN THE HOSPITAL ?
  
15. DO YOU KNOW WHY THEY DO NOT DELIVER IN THE HOSPITAL ?
  
16. HOW LONG DOES A PREGNANT WOMAN REMAIN IN THE HOSPITAL FOR AN ANTENATAL APPOINTMENT ON A CLINIC DAY BEFORE SHE GOES HOME ?
  
17. DO PREGNANT WOMEN PAY FOR THEIR DRUGS ?
  
18. ARE THEIR DRUGS READILY AVAILABLE TO THEM ?
  
19. ARE THERE ENOUGH BEDS IN LABOUR WARD FOR WOMEN TO DELIVER ?
  
20. DO WOMEN STILL SHARE BEDS IN THE LABOUR WARD ?

21. HAVE YOU HEARD ABOUT TBAS ?

22. HAVE YOU VISITED THEM BEFORE ?

23. PLEASE WHAT MADE YOU VISIT THEM ?

24. WHY DO YOU THINK PREGNANT GO TO THEM ?

25. WHAT CHANGES WOULD YOU LIKE TO SEE IN THE PROCESS OF CARE  
FOR PREGNANT WOMEN IN HOSPITALS ?



## Appendix 4

QUESTIONNAIRE ADMINISTERED TO GYNAECOLOGISTS ON THE UTILIZATION OF OBSTETRIC SERVICES BY PREGNANT WOMEN IN THE CITY OF PORT-HARCOURT.

1. NAME : (OPTIONAL)

CODE

2. HOW LONG HAVE YOU BEEN TAKING CARE OF PREGNANT WOMEN AND DELIVERIES ?

3. WHAT SORT OF CONSULTATION SYSTEM DO YOU USE ? (E.G. APPOINTMENT SYSTEM ETC.)

4. AT WHAT STAGE OF PREGNANCY DO YOU START LOOKING AFTER A PREGNANT WOMAN ?

5. DO ALL PREGNANT WOMEN WHO ATTEND YOUR CLINIC SEE YOU IN THE COURSE OF THEIR PREGNANCY ?

6. WHAT STAGES OF CARE WOULD A PREGNANT WOMAN GO THROUGH WHEN SHE REPORTS TO THE HOSPITAL ?
  
7. HOW LONG DOES A WOMAN STAY IN HOSPITAL AFTER DELIVERY ?
  
8. DO YOU VISIT WOMEN AT THEIR HOMES AFTER DELIVERIES ?
  
9. DO YOU CONDUCT HOME DELIVERIES ?
  
10. HOW MUCH WOULD IT COST A WOMAN TO UTILIZE YOUR SERVICES FROM PREGNANCY TO DELIVERY FOR A NORMAL DELIVERY ?
  
11. IS THIS AMOUNT READILY AFFORDABLE BY THE AVERAGE WOMAN ?

12. WHAT IS THE AVERAGE NUMBER OF HOURS A PREGNANT WOMAN WOULD EXPECT TO SPEND ON AN ANTENATAL VISIT IN THE HOSPITAL ?
  
13. HOW DO PREGNANT WOMEN GET THEIR DRUGS DURING ANTENATAL CARE ?
  
14. HOW DOES THE "OUT OF STOCK" (OS) SYNDROME AFFECT THE CARE YOU DELIVER TO PREGNANT WOMEN ?
  
15. WHO DETERMINES THE NEED FOR A CAESERIAN SECTION ?
  
16. IN WHAT CIRCUMSTATNCIES DO YOU PERFORM CAESERIAN SECTION ?
  
17. DO WOMEN UNDERSTAND THE NEED FOR A CAESERIAN SECTION ?
  
18. HOW MANY CAESERIAN SECTIONS DO YOU PERFORM IN A MONTH

19. ARE HUSBANDS ALLOWED TO BE PRESENT DURING LABOUR ?

20. ARE YOU AWARE OF THE TBA PRACTICE ?

21. DO TBAS REFER CASES TO YOU ?

22. WHAT SORT OF REFERRALS DO TBAS SEND TO YOU ?

23. DO YOU REFER CASES TO TBAS ?

24. HAVE YOU HAD ANY DIRECT CONTACT WITH A TBA BEFORE ?

25. WHY DO SOME WOMEN GO TO TBAS INSTEAD OF THE HOSPITAL ?

26. WHY DO SOME WOMEN USE BOTH YOUR SERVICES AND THOSE OF THE TBAS ?

27. IS THERE A PROVISION FOR A FEEDBACK SYSTEM WHEREBY YOU  
WOULD KNOW WHETHER OR NOT THE WOMEN ARE SATISFIED WITH THE  
PROVISION OF YOUR SERVICES ?

## Appendix 5

### Interview guide for 1991/1992 follow-up Study

- (1) Remind respondent of questionnaire filled in at hospital/TBA residence.
- (2) Name of respondent or code for continuity
- (3) Request a recap of current state of pregnancy
- (4) Age of respondent
- (5) Marital status
- (6) Occupation
- (7) Is your partner resident?
- (8) Partner's occupation
- (9) Parity status to be established
- (10) Month of current pregnancy
- (11) Any concerns about the pregnancy?
- (12) Number of visits made to hospital/TBA in the last month?
- (13) Establish who was visited?
- (14) Establish why the visit was necessary
- (15) Establish if a visit has been made to a TBA
- (16) Establish if the woman has gone for massage
- (17) If she has been for massage at the TBA, when was the last time she went for a massage
- (18) How did she feel after the massage?
- (19) If the respondent visited a hospital or health centre; Who saw her?
- (20) Was the respondent happy with treatment?
- (21) If the respondent was unhappy with the treatment, why is she unhappy?
- (22) How long was the respondent there before being attended?
- (23) Was the respondent seen by the same doctor?
- (24) What is the respondent most concerned about?
- (25) Has the respondent got any fears?
- (26) Was the respondent's baby checked at the hospital?
- (27) Was the respondent informed about the baby?

- (28) Is she is a dual utilizer- did the TBA inform her about the baby?
- (29) Does the respondent have any pains?
- (30) Is the respondent on any medication or drugs?
- (31) Who dispensed the drugs?
- (32) For what purpose were the drugs dispensed?
- (33) How long did the total antenatal visit last?
- (34) Where would the respondent like to deliver the baby?
- (35) Ask any other questions and encourage the respondent to talk about what they wish.

ALPHABETICAL List of codewords used in coding QUALITY 4/8/1994 11:32

N	CODEWORD	N	CODEWORD	N	CODEWORD	N	CODEWORD
13	AGE	14	ANXIEPREG	14	ANXIEPREGB	7	ANXIEPREGC
13	ATTCARERH	1	ATTCARERHB	1	BABYDIE	1	CAREHOSPC
14	CARERCONH	15	CARERCONHB	7	CARERCONHC	8	CARERCONT
10	CARERCONTB	6	CARERCONTC	14	CARERHOSP	8	CARERHOSPB
4	CARERHOSPC	1	CARERTBA	1	CARERTBAB	1	CARERTBAC
1	COMPAREB	14	DELIVERY	12	DELPLACE	14	DRUGAVAIL
13	DRUGAVAILB	6	DRUGAVAILC	9	DRUGTBA	7	DRUGTBAB
4	DRUGTBAC	14	FIRHOSVIS	1	FIRHOSVISB	6	FIRTBAVIS
1	FIRTBAVISB	7	HOSPAPPT	4	HOSPAPPTB	1	HOSPAPPTC
13	HUSBOCCUP	17	IDENTITY	8	IMMUNIZE	14	MARSTAT
13	MASSAGE	12	MASSAGEB	7	MESSAGEC	1	MESSAGEFEE
9	NORMALDEL	14	OCCUP	1	OTHCARE	12	OTHCARER
11	OTHCARERB	6	OTHCARERC	1	PLANDELB	1	PLANDELC
4	PREFERTBA	14	PREGAGE	13	PREGAGEB	6	PREGAGEC
15	PREGNUM	14	PROBPREG	13	PROBPREGB	6	PROBPREGC
3	READELPLAC	4	REAVISTBA	5	REAVISTBAB	2	REAVISTBAC
3	REMASSAGE	2	REMASSAGEB	12	REUSE	4	REUSETBA
14	ROUHOSPTD	14	ROUHOSPTDB	7	ROUHOSPTDC	9	SEXTBA
3	SEXTBAB	1	STAFFPROBE	1	TBADRUG	1	TBAFEEDBKC
14	TIMEHOSP	14	TIMEHOSPB	6	TIMEHOSPC	10	TIMETBA
10	TIMETBAB	4	TIMETBAC	1	TRAVELC	6	USEHOSFRQ
7	USEHOSFRQB	5	USEHOSFRQC	13	USETBA	2	USETBAB
1	USETBAC	3	WORTHIT				





(Specify)  
No One \_\_\_\_\_ 5

Below are also some questions from the DHS service availability questionnaire. These questions are useful in providing the answers to what choices were actually available in areal clusters sample by the DHS survey.

Section 2, page 6 Q2

Type of locality  
Answers: Town/City \_\_\_\_\_ 1 → Q3,  
Village \_\_\_\_\_ 2,  
Country Side \_\_\_\_\_ 3 → Q3

Page 7 Q10

Is the cluster covered by the traditional birth attendant?

Answer: Yes ----- → Q10A  
No ----- (Go To Q11)

Q10A

Is the traditional birth attendant trained in modern techniques?

Answers: Yes \_\_\_\_\_ 1,  
No \_\_\_\_\_ 2

Q11

Is the cluster covered by a trained midwife?

Answers: Yes \_\_\_\_\_ 1,  
No \_\_\_\_\_ 2