FACTORS ASSOCIATED WITH LATE REPORTING FOR ANTENATAL CARE AMONG WOMEN OF CHILD-BEARING AGE IN UBI LOCAL GOVERNMENT AREA, ENUGU STATE, NIGERIA

BY

EMILY CHINYELUGO OKEKE
MATRIC NO: 130355

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DEDICATION

This work is especially dedicated to my mother Mrs. Mary Assumpta Okeke (Nee Ife) who bravely bore the pains of motherhood and was also instrumental to the launching of my career.

ABSTRACT

Maternal mortality due to pregnancy and childbirth poses a major public health challenge in Nigeria and late reporting for Antenatal Care (ANC) is known to be a contributory factor. However, the reasons for poor utilization of antenatal services are yet to be adequately documented. This study therefore assessed factors associated with late reporting for ANC among women of child-bearing age in Udi Local Government Area (LGA), Nigeria.

A two-stage random sampling technique was used to select 450 respondents from three (Ngwo, Udi and Umuabi) out of twelve communities in Udi LGA. The inclusion criteria included registration for ANC and delivery of a life baby in the two years preceding the survey. A validated semi-structured questionnaire was used to collect quantitative data. Six Focus Group Discussions (FGDs) and nine Key Informant Interviews (KIIs) were conducted among respondents. Quantitative data were analyzed using descriptive and Chi-square statistics. The thematic approach was used for analyzing the qualitative data.

The mean age was 27.7 ± 5.2 years; most (99.4%) were married and 67.1% were employed. Majority (63.1%) had secondary education. The mean number of antenatal visits was 8.1 ± 1.6. Facilities used included private (60.4%) and public (30.4%) health care establishments, traditional delivery homes (4.9%) and simultaneous use of public and private facilities (4.2%). Forty-one percent booked early while 59.0% registered late. Of the 266 who reported late, 87.2% and 12.8% booked during the second and third trimesters respectively. The major reasons for reporting early included inexperience (72.3%) and ill health (52.6%). Major reasons for reporting late included prior experience (95.1%), perceived sound health (75.8%) and nonchalant attitude (72.8%). The pattern of late reporting by level of education was primary (20.5%), secondary (65.5%) and tertiary (14.0%) ($p<0.05$). More respondents carrying first pregnancies (54.3%) booked early compared with those with two or more previous pregnancies ($p<0.05$). The reasons for non-compliance with follow-up visits among 17.1% of the respondents were "feeling wellness" (37.7%) and enough experiences from previous pregnancies (62.3%). Respondents' attitude to early booking was positive as 94.4% agreed that the best time to register for ANC was in the first trimester. The perceived consequences of late booking included complications (84.4%), poor

health outcomes for the baby (58.2%), inadequate planning for delivery (51.6%), and missed opportunity for health education (49.6%). The view of most key informants was that women booked late for ANC due primarily to lack of knowledge of the associated benefits. Most FGD discussants associated late reporting for ANC with wrong perception of pregnancy and believed that public enlightenment could help in addressing the situation.

The high prevalence of reporting late for Antenatal care was due mainly to misconceptions. Health education should focus on promoting early booking for Antenatal care as an indispensible health seeking behaviour.

Key words: Antenatal care, Late reporting, Women of child-bearing age.
Word count: 453

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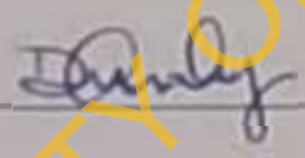
CERTIFICATION

I certify that this study was carried out by Emily Chinyelugo Okeke in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Ibadan, Nigeria.



Supervisor

Dr. Oyedunni S. Arulogun,

B.Ed, M.Ed (MPH, PhD (Ib), FCCSH (Nig)

Senior Lecturer, Department of Health Promotion and Education,

Faculty of Public Health, College of Medicine,

University of Ibadan, Nigeria.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care
BCG	Bacille Calmette Guerine
BPCR	Birth Planning and Complication Readiness
CBO	Charity Based Organisation
CHEW	Community Health Extension Worker
COMPASS	Community Participation for Action in the Social Sector
FANC	Focus Antenatal Care
FBO	Faith Based Organisation
DHS	District Health System
EOC	Essential Obstetric Care
FGDs	Focus Group Discussions
FGN	Federal Government of Nigeria
FMOH	Federal Ministry of Health
Hb	Haemoglobin
HBM	Health Belief Model
ICPD	International Conference on Population and Development
IEC	Information Communication and Education
IMF	International Monetary Fund
IPT	Intermittent Preventive Treatment
IPT-SP	Intermittent Preventive Treatment with Sulfadoxine Pyrimethamine
ITNs	Insecticide Treated Bed Nets
JHPIEGO	An affiliate of Johns Hopkins University specializing in reproductive health issues
KIIs	Key Informant Interviews
LGA	Local Government Area
LHAs	Local Health Authorities
MDGs	Millennium Development
NBC	Nigerian Bottling Company
NBL	Nigeria Breweries Limited
NDHS	National Demographic Health Survey
NPC	National Population Commission

PHC	Primary Health Care
PIH	Pregnancy Induced Hypertension
PMVs	Patent Medicine Vendor
SMI	Safe Motherhood Initiative
SMOH	State Ministry of Health
SOGON	Society of Gynaecologists and Obstetricians of Nigeria
SPSS	Statistical Package for Social Sciences
STIs	Sexually Transmitted Infections
TBA	Traditional Birth Attendant
UBTH	University of Benin Teaching Hospital
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations International Children Emergency Fund
HIV	Human Immuno Deficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
UNTH	University Of Nigeria Teaching Hospital
USAID	United States Agency for International Development
VDRL	Veneral Disease Research Laboratory
VVF	Vesico Vaginal Fistulae
WB	World Bank
WHO	World Health Organisation

DEFINITION OF TERMS

For the purpose of this study the following words were used:

Antenatal care (ANC): any form of care or interventions that a pregnant woman receives from any form of organized health care setting other than her home.

Area of residence: the community where respondent was living at the time of this study which should correspond to the place where she had ANC and delivery in the last two years. For the purpose of this study they include Ngwee, Umuahia and Edi.

Booked women: Those who received formal antenatal care and delivered within the UNTH.

Early reporting: booking or initiating antenatal care before or at the 13 completed weeks of gestation.

Gestational age: the age of a particular pregnancy counted in weeks beginning from the date of last menstrual period of that pregnancy to the day of delivery.

Indirect maternal deaths: Deaths resulting from previous existing disease or disease that developed during pregnancy and which was due to direct obstetric causes.

Infrequent use of ANC: having made less than three ANC visits, the minimum number needed to benefit from intermittent preventive treatment (IPT) with sulfadoxine- pyrimethamine for malaria.

The last confinement: the immediate past pregnancy period.

Late reporting: booking or initiating antenatal care after the 13 completed weeks of gestation.

Maternal death: The death of a woman from pregnancy-related causes while pregnant or within 42 days of termination of the pregnancy. Direct maternal deaths: Deaths resulting from obstetric complication of the pregnant state.

Maternal mortality ratio: The number of maternal deaths per 100,000 live births.

Multigravida woman: a woman who had delivered more than once.

Nulliparous woman: a woman who has never delivered a child before.

Parity: number of pregnancy/pregnancies a woman has had.

Parous woman: a woman who has given birth on at least one occasion.

Primipara (e): woman/women who had delivered for the first time.

Skilled attendant/health care personnel: a medically qualified provider with midwifery skills (midwife, nurse or doctor) who has been trained to proficiency in the

skills necessary to manage normal deliveries and diagnose, manage, or refer obstetric complications.

Traditional birth attendant (TBA): a community-based provider of care during pregnancy and childbirth other than a skilled attendant.

Unbooked women: Those who did not receive any formal ANC but presented to any health facility in labour or with complications.

Women of child-bearing age: women in their reproductive years who are between ages 15–49.

CHAPTER ONE

INTRODUCTION

Background to the study

Maternal mortality is a serious public health problem worldwide. Complications of pregnancy and childbirth are the leading cause of disability and death among women between the ages of 15-49. Although the topic has dominated discussions in many international and regional conferences for two decades now, ratios of mortality and morbidity among women of child-bearing age have remained high especially in sub-Saharan Africa and Asia – areas where most of the deaths occur (United Nations, 2006).

Maternal mortality refers to the death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and the site of the pregnancy from any cause related to or aggravated by the pregnancy or its management, but not from incidental or accidental causes (WHO, 1992; WHO, 1993). It is estimated that approximately 585,000 women (equivalent to one woman every minute) die globally each year as a result of complications of pregnancy and childbirth. 99% of these deaths occur in developing countries and up to 90% in sub-Saharan Africa and Asia. For each woman who dies, many more suffer damage to their health. In addition to this, each year over 50 million women experience pregnancy-related complications, 15 million of which lead to life-long pains, disability and economic exclusion. As a result, 300 million women suffer from pregnancy – related health problems and disabilities such as anaemia, uterine prolapse, fistulae, pelvic infections and infertility (UNFPA/ WHO/ UNICEF, 2003).

A report on population activities by the United Nations (UN) showed that maternal deaths are from preventable causes that could be avoided with adequate and available resources and health services (UNFPA, 2004). According to the report, approximately

80% of maternal deaths worldwide are due to five direct causes: haemorrhage, obstructed labour, eclampsia (pregnancy-induced hypertension), sepsis (infection and unsafe abortion); indirect causes are responsible for the remaining 20% and are due to an existing medical condition that is worsened by pregnancy or delivery (such as malaria, anaemia, hepatitis, or increasingly, AIDS). The same source noted that in developed countries, the availability of high-quality health services has made maternal death a rare occurrence. On the contrary, maternal mortality situations have reached an alarming stage in most developing countries. Women in Nigeria are directly affected by low utilization of healthcare services (Okafor, 2003); and poverty and limited access to appropriate care pose major challenges to improving maternal health and reducing maternal mortality. Maihai (2005) argued that the knowledge and technology to prevent deaths among women are available but do not reach the intended target in time due to one or more delays- delay in deciding to seek care, delay in reaching care, and delay in receiving care after reaching the place of care.

The resulting impact of these deaths on family and community is enormous. Beyond the immediate suffering and grief caused, maternal deaths diminish children's own life chance eDeath rates for these children, measured over the two years after the women's deaths, are between three and ten times higher than for children with both parents living (Panos Institute, 2002). Recent esthmates for Africa are that between 2001 and 2010 there will be 2.5million maternal deaths, 7.5million child deaths, and 49 million maternal disabilities, with a cost to economic productivity of 45million US dollars (WHO, 2004).

The need to reduce death among reproductive age women is now of paramount concern to nearly all the governments of the world particularly in developing countries such as Nigeria. Many strategies have been tested to improve the maternal mortality situation in the world, yet not all strategies in the past have yielded the desired results. Following the launch of the Safe Motherhood Initiative (SMI) in 1987, the goal of reducing maternal mortality has been stressed in many global conferences, from the World Summit for Children in 1990 to the International Conference on Population and Development (ICPD) and its review (ICPD+5) in 1999. In 2000, the United Nations (UN) Member States at the Millennium Summit, set and adopted for themselves a total of eight goals called the Millennium Development Goals (MDGs), with well specified

objectives and strategies for achieving them. Inclusion of maternal mortality prevention as one of the goals illustrated that the global community views safe motherhood as a top priority (Bloom, Lippeveld, and Wypij, 1999; UNFPA, 2003; Haines and Cassels, 2004).

Improving maternal health is the fifth goal of the Millennium Development Goals (MDG-5). The target is to reduce maternal mortality rate by 75% between 1990 and 2015. However, analysis of progress by the World Bank in recent past revealed that only in three regions (Eastern and South-Eastern Asia and Northern Africa) were any significant progress made and that the developing world was off target (World Bank and IMF, 2004; UN, 2006). Both the progress- use of skilled attendant at delivery, and process indicators-essential obstetric care (EOC), were also not encouraging (Maine and Rosenfeild, 1999; Wagstaff and Claeson, 2004). Although all regions of the world showed improvement in the number of deliveries attended by a skilled health care personnel- physician, nurse, midwife or trained traditional birth attendant (TBA), only 46% of deliveries in sub-Saharan Africa are assisted by skilled attendants (United Nations, 2006). Fewer than 50% of the women in some countries attend even one antenatal consultation, a health preventive measure targeted at every pregnant woman, with any trained person. The resultant effect is further reduction in the number of women assisted by skilled health care personnel during delivery followed by a corresponding rise in the number of women with poor delivery outcomes. This has implications to health. Providing evidence in his report, Jowett (2000) wrote that improving access to EOC is the key to reducing maternal mortality.

Antenatal care (ANC) is named as one of the four pillars of SMI programmes. Provision of antenatal services is one of the most cost-effective strategies for reducing maternal deaths in many countries (Nanani and Parker, 2005). Investigations have shown that a strong positive correlation exists between antenatal use and likelihood of using safe delivery care. An analysis of ANC use patterns and trends, using data drawn from household surveys carried out in 43 developing countries during the 1990s and 2000-2001 showed that women who had four or more antenatal visits are far more likely to have given birth with medical assistance than women having fewer visits (WHO/UNICEF, 2003). A study conducted in India by Bloom, Lippeveld and Wypij (1999) showed that after controlling for socio-demographic and maternity history

factors, women with a relatively high level of care at 75th percentile of the score, had an estimated odd of using trained assistance at delivery that was almost four times higher than women with a reduced level of care at the 25th percentile of the score. With regard to pregnancy outcomes, a study estimated that ANC and community-based interventions can prevent 26 percent of maternal deaths and another 48 percent can be avoided by ensuring access to quality EOC (Jowett, 2000).

Overall, findings of many studies suggest that a high level of utilization of obstetric services including early reporting to antenatal clinic will ensure a high level of maximization of the benefits of maternal health programme and so ensure a better health outcome for both women and infants (Mella, 2003). But in practice, a combination of factors including poor health-seeking behaviour and limited access to EOC are responsible for the dismal maternal mortality picture. In many countries of Africa, utilization of obstetric services is still very low. Low ANC attendance in the first trimesters has been reported in many countries such as Zimbabwe, Tanzania, Uganda and Nigeria (Kambarami, Chirenje and Ruzakaniko, 1999; Massawe, Urassa, Nystrom, 1999; Mwaniki, Kabiru, Alhuguu, 2002). For instance, in some countries antenatal coverage is as low as 26%; a significant proportion of pregnant women receive no care at all. A large number of the women attending ANC book late and many antties do not deliver in hospitals even after attending antenatal care (Jimoh, 2003). In Nigeria utilization of modern ANC is poor in most parts of the county and majority of those who present at all do so late (Ebeigbe and Igberase, 2005). Consequently, only one in three pregnant women received skilled assistance when in labour.

Statement of the problem

A key objective of maternal health care programmes has been to ensure that women present for ANC early in pregnancy in order to allow time for essential diagnosis and treatment regimens. When women report early in their pregnancy, they avail themselves of the opportunity for many important health programmes other than that of obstetric care. But late ANC attendance may preclude them from benefiting fully from these preventive strategies, particularly iron and folic acid supplementation, treatment of helminthic infections and intermittent preventive treatment with Sulfadoxine-pyrimethamine (IPT-SP) for malaria in pregnancy (van Eijk, Bless,

Odhiambo, Ayisi, Blokland, Rosen, Adazu, Slutsker, and Lindblade, 2006). Malaria, tuberculosis, nutrition and HIV/AIDS and other sexually transmitted infections (STIs) e.g. syphilis programmes become underutilized. About 25% of study participants in one study did not get a minimum of two doses of tetanus toxoid. This predisposed them and their neonates to the risk of contracting tetanus, one of the major causes of neonatal mortality in Nigeria. Maternal tetanus is responsible for at least 5 per cent of maternal deaths, approximately 30,000 deaths annually (UNICEF/WHO/UNFPA, 2000). A study in Kenya showed that barely half of the women received haematinic supplements; one out of five women received one or more doses of sulfadoxine-pyrimethamine for malaria and an anthelminthic treatment was received by only 3% (van Eijk et al. 2006) mainly because they registered late in their pregnancy. Malaria is especially dangerous for pregnant women and their unborn children. In sub-Saharan Africa, malaria infection is estimated to cause 400,000 cases of severe maternal anaemia and 75,000–200,000 infant deaths annually. Maternal anaemia contributes significantly to maternal mortality and causes an estimated 10,000 deaths per year. Co-infections of malaria and HIV/AIDS—which are most common in sub-Saharan Africa—have major health implications. HIV/AIDS increases the risk of infection with malaria and decreases response to standard anti-malarial treatment. Malaria also contributes to increased viral load among HIV-infected people (UHPHCO, 2007).

The first booking visit is very significant in many ways as it helps health service providers use the occasion to collect basic medical information that will form the basis to care for the patient throughout the period of pregnancy and beyond. Late reporting therefore negates this objective with the result that some underlying medical complications may pass undetected. This is one of the causes of delays in getting timely interventions in cases of emergencies.

Information about the reasons for reporting late for ANC among pregnant women in Nigeria is yet to be adequately documented. Few studies relating to the topic were conducted in the hospitals (Ezeugwu, Onah, Ezeugwu, and Okafor, 2005; Ghanotra, and Iglesias, 2000). To the best knowledge of the researcher, no investigation of this nature has been carried out in any rural community of the state. There was need therefore, to conduct this study in Udi local government area (LGA) of Enugu State, Nigeria, one of the largest rural LGAs of the state.

Justification of the study

Antenatal care is an essential part of modern health care and every pregnant woman needs full access to antenatal service. To fully benefit from all its intervention packages, it is important that women develop positive health-seeking behaviours that will encourage timely and appropriate use of ANC services. This will directly impact on maternal and child health outcomes. This study was therefore, important in three ways. First, it explored deeply into and exposed the root causes of late initiation of ANC among the reproductive age women. Secondly, changing unhealthy behaviours is one of the most effective approaches to improving utilization of important health programmes such as ANC services. Health care providers and health planners will find the results of this investigation useful in designing health education programmes that will help improve early reporting for ANC. Thirdly, the current on-going health system reforms of government will find enough evidence in the result of this study to support its action plans.

Research questions

This study set out to answer the following questions:

1. What are the knowledge and opinions of women about antenatal services in their communities?
2. What are the attitudes of women towards use of antenatal services?
3. What are the ANC practices of women in the last pregnancy period?
4. What are the women's perceived consequences of late reporting to ANC?
5. What factors hinder or promote early reporting to ANC among the study population?
6. What are the women's suggestions of ways to improve ANC attendance among pregnant women?

Hypotheses

The following hypotheses were tested:

1. There is no significant relationship between the age of the respondents and time of reporting for ANC.
2. There is no significant relationship between the area of residence and the time of reporting for ANC.

3. There is no significant relationship between the educational level of women and the time of reporting for ANC.
4. There is no significant relationship between the employment status of the women and time of reporting for ANC.
5. There is no significant relationship between the numter of pregnancy/pregnancies of the women and the time of reporting ANC.
6. There is no significant relationship between the knowledge of women about ANC facilities in the community and the time of reporting ANC.
7. There is no significant relationship between attitude of the women and time of reporting for ANC.

Objectives of the study

The broad objective of the study was to assess and document factors associated with late reporting for antenatal care among women of child-bearing age in Udi local government area of Enugu state, Nigeria.

The specific objectives were:

1. To document the knowledge and opinions of women about antenatal services in their communities.
2. To examine the attitudes of women to use of antenatal services.
3. To determine and document the ANC practices of women in their last pregnancy period.
4. To assess the knowledge of women about consequences of late reporting for ANC.
5. To identify and document those factors that hinder early reporting for ANC.
6. To document the suggestions of women about ways to promote early reporting for ANC.

CHAPTER TWO

LITERATURE REVIEW

In this section, reports of different researchers were reviewed in an attempt to set the stage for this study. The major headings that were discussed include: the global picture of maternal mortality, maternal mortality situation in Nigeria, concept of ANC, medical and obstetric implications of ANC. The following were also reviewed: current status and trends in ANC use, models and contents of ANC, the focused antenatal care, including ANC in poor resource developing countries. Others were ANC in Nigeria, factors influencing utilization of ANC, factors influencing gestational age at reporting, improving utilization of ANC service and the conceptual framework of the study.

Maternal mortality: the global and African picture

Studies have shown that a considerable difference exists in the levels of maternal mortality between high income and low income countries, and between the rich and the poor within countries. Only one percent of maternal deaths occur in the developed world. Maternal mortality ratios range from 830 per 100,000 births in African countries to 24 per 100,000 births in European countries. Of the 20 countries with the highest maternal mortality ratios, 19 are in sub-Saharan Africa. Some of these include Rwanda, Sierra Leone, Burundi, Ethiopia, Somalia, Nigeria, Chad, Sudan, Burkina Faso, Equatorial Guinea and Kenya. Rural populations suffer higher mortality than urban dwellers, rates can vary widely by ethnicity or by wealth status, and remote areas bear a heavy burden of deaths (Fraser, 2005; WHO, 2007). In the industrialized countries, maternal mortality ratio is as low as 12 per 100,000 live births, 440 per 100,000 in the developing countries and as high as 1,000 per 100,000 in the least developed countries. With an estimated maternal mortality ratio of 1,100 per 100,000 live births (almost thrice the global figure) sub-Saharan Africa has the highest risk of maternal death in the world. A woman's lifetime risk of dying due to pregnancy complications in the region is 1 in 13 as opposed to 1 in 4,100 in industrialized nations. For instance, whereas one out of every 3,800 women stands the risk of death over the course of her reproductive lifetime in the United Kingdom, 1 in 6 has a similar risk in Sierra Leone and Afghanistan (WHO/UNICEF/UNFPA, 2003).

Maternal mortality situation in Nigeria

The National Population Commission (NPC) (2004) estimates that there are about 60 million women in Nigeria, and of these, 27 million are in the reproductive age (15-49) years. Other demographic characteristics of Nigerian women are:

Married by age 34	95%
Median age at first marriage	18 years
Adult female literacy rate	41%
Contraceptive prevalence rate	8.9%
Total fertility rate	5.1

The near universality of marriage, the early age at marriage, the low literacy rate among adult females, the low utilization of contraceptives and a pro-natalistic socio cultural milieu have led to a persistently high fertility rate. The total fertility rate is 5.1 implying that, on the average, a woman bears more than 5 children in her lifetime. With each additional pregnancy and childbirth, the woman faces an even greater risk of experiencing complications that can result in disability or death (WHO, 2003).

Nigeria's maternal mortality situation is grave and its statistics have been indicated as one of the highest in the world (Federal Ministry of Health (FMOH), 2001; FGN, 2002; FGN, 2004; FMOH, 2004; Shillman, Okonofua and Ved, 2006) despite several intervention programmes aimed at its reduction (Umeora, Ejikeme and Egwuatu, 2005; Umoiyoho, Abasiattai, Udonna and Etuk 2005). Available data showed that an estimated 54,000 women and girls die each year. This represents 10% of the global annual figure though Nigeria contributes about 2% of world population (WHO, UNICEF, UNFPA and World Bank, 2001). Annually, close to 1.06 to 1.6million morbidity occurs. Maternal mortality ratio ranges between 800 and 1500 per 100,000 live births. The average maternal mortality ratio of 1000 per 100,000 deliveries often quoted for Nigeria is derived mainly from figures from urban based hospital studies. In the rural areas maternal mortality ratio appear much higher (Sule-Odu, 2000; Adanu and Salihu, 2002; Egwuatu, 2003; Uzoigwe and John, 2004). A woman's lifetime risk of dying is as high as 1 in 13 – the worst anywhere in the world (Lindroos and Lunkkainen, 2004; Kupau, 2005). This is worsened by low rate of family planning usage of only 10% and corresponding high fertility rate estimated at 5.7 children per woman (NDHS, 2008). This average masks considerable variations that exist between

zones and within cities with the northern part of the country having the worst experience. Needs assessment report of the Society of Gynaecologists and Obstetricians of Nigeria (SOGON) shows the following distribution of maternal mortality ratio:

Table 2.1. Maternal mortality ratios in some selected states in Nigeria

City	MMR
Enugu	703
Borno	727
Plateau	846
Cross River	2,977
Lagos	3,360
Kano	7,593

Source: SOGOS (2004).

Ninety-five percent of these deaths are attributable to seven causes, namely: bleeding (haemorrahage) during pregnancy or delivery, infection (sepsis), pregnancy induced hypertension (PIH), unsafe abortion, obstructed labour, malaria and anaemia (WHO/UNICEF, undated; UNFPA 2002; Lucas and Gilles, 2003; Ezugwu, et al, 2005). A review of maternal mortality data at Ogun State University Teaching Hospital, Sagamu, Nigeria, found a maternal mortality ratio of 1,936.1 deaths per 100,000 live births. Eighty-six percent of the deaths were due to obstetric causes, and 11 percent cases related to septic induced abortions. Maternal deaths were higher for unbooked than booked cases (Sule-Odu, 2000). Maternal death reviews have also shown that many maternal deaths occur as a result of three main delays namely:

- Delay of pregnant women and their families in deciding to seek appropriate care
- Delay in reaching treatment facility after deciding to seek care
- Delay in receiving adequate treatment after the woman has reached the health care facility.

Lack of birth planning and complication readiness (BPCR) contributed to all of the delays (Panos Institute, 2001; UNICEF, 2006). The National HIV/AIDS and Reproductive Health Survey (2003) revealing some of the reasons why women die

unnecessarily in Nigeria due to pregnancy and childbirth pointed out that only 37% of pregnant women receive ANC from doctors, nurses and midwives, while about 35% of them do not receive care at all. As many as 50% of teenage women do not receive any form of ANC. Less than 5% of women made 4 or more antenatal visits, contrary to the WHO recommendation of at least 4 visits for low risk women to ensure proper care (FMOH, 2006). There was an obvious decline in the proportion of women who received ANC from health professionals between 1999 and 2003 as clearly shown by the respective National Demographic Health Surveys (NDHS1 - 63.6% and 58.8% respectively (NDHS, 1999; NDHS, 2003; FMOH, 2004).

Antenatal care use, among others, is one of the process indicators for monitoring the Millennium Development Goal 5 (MGD-5) which is, to improve by three-quarter the maternal health situation by the year 2015. Although some authorities have argued on its substantial effect in reducing morality among women, there are several evidence to show that as a preventive intervention strategy it will have a huge impact on mortality rates if targeted at the appropriate population (Waggstan and Claeson, 2004; Ross, 2007). Effective ANC services have been reported to improve maternal health, thus reducing maternal/infant morbidity and mortality (Jimoh, 2003; Mesganaw, Abubeker and Assefu 2005; Pamela, Janis, Trecia, Sarnia, Maybarb and Tevila, 2005). The introduction of ANC in 1913 was pioneered by Ballantyne at the University of Edinburgh who attributed the high perinatal mortality rates observed at the beginning of the 20th Century to inadequate maternity care during pregnancy and lack of supervision of progress of labour. During the 1930s, the falling mortality rates were associated with a gradual increase in the number of antenatal visits because women were encouraged to initiate ANC during pregnancy and were counselled to deliver in hospitals (Dodd, Robbinson and Crowther, 2002).

A recent descriptive study conducted in a tertiary hospital in Enugu however, found that over a two year period, a maternal mortality ratio of 2397.3 maternal deaths per 100,000 live births. The principal maternal risk factors identified were unbooked status/no ANC (21.3%), primigravidity/nulliparity (19.1%), previous caesarean section (6.4%), HIV/AIDS (4.3%), poor attendance at the antenatal clinic (4.3%), grandmultiparity (4.3%), two previous perinatal deaths (2.1%), previous history of hypertension (2.1%), family history of hypertension (2.1%), cardiac disease in

pregnancy (2.1%), teenage pregnancy (2.1%) and premature rupture of membranes (2.1). The results also showed that the key avoidable factors were delay in seeking care by the patient (19.1%), delay in recognizing a problem (6.4%), financial constraints (i.e. inability of the patient to pay for relevant tests, drugs or both: 8.5%), lack of blood for transfusion (4.3%), lack of drugs (2.1%), industrial strike action by health workers (2.1%) and substandard care (27.7%) (Ozumba and Nwogu-Ikojo, 2008).

Concept of antenatal care

Antenatal care, in its simplest meaning, is the care of a woman during pregnancy. According to Viccars (2003), it is the care given to a pregnant woman from the time that conception is confirmed until the beginning of labour. Rania (2003) noted that as a preventive programme, it is designed to screen a population of pregnant women in order to detect those at risk of disease, prevent, treat or manage certain asymptomatic complications of pregnancy such as eclampsia or pregnancy induced hypertension (PIH). Navin (2003) was broader in his opinion and wrote that ANC is one concept that extends from pre-pregnancy to the postpartum period, leading to effective emergency care for unpredictable and predictable complications during pregnancy and childbirth. According to him, the prospects of a smooth pregnancy and the birth of a healthy baby are aided by thorough ANC and is a good entry point for interventions that could save maternal and newborn lives. In other words, this care should have begun even before pregnancy and continued throughout pregnancy and after delivery. Noting the formal nature of the care, Majoko (2005) pointed out that ANC is the complex of interventions that pregnant women receive from organized health care services, referring to it as the pregnancy-related services provided between conception and delivery consisting of monitoring the health status of women, providing information to foster optimal health, good delivery habits and proper hygiene as well as providing appropriate psychological and social support.

In the national clinical service protocol for obstetric and neonatal care (2006), the Federal Ministry of Health (FMOH) in conjunction with USAID and Community Participation for Action in the Social Sector (COMPASS), defined ANC as the supervision, advice and intervention given to a pregnant woman by a health care provider during which a relationship of trust and confidentiality is established between them. It should therefore focus on ensuring, supporting and maintaining maternal and

fetal well-being throughout pregnancy and childbirth. In their own definition. Campbell and Lee (2005) were of the view that ANC is the clinical assessment of mother and foetus during pregnancy for the purpose of obtaining the best outcome for both mother and child.

From the fore-going, and for the purpose of this study, ANC can be summarized as the planned examination, observation, investigation, treatment and counselling given to a Pregnant mother; the advice, supervision and attention a pregnant woman receives to ensure good health throughout the period of pregnancy, up to the delivery of a live healthy baby.

Goals of antenatal care

The goal of ANC, according to Rania, Floud, Suarez Ojeda, 1987, is to prevent health problems in both infant and mother and to see that each newborn child has a good start. Its primary aims are fourfold namely:

- To detect early factors that may heighten the perinatal risk of both individual pregnancies and members of vulnerable groups;
- To intervene to improve outcomes;
- To educate all who provide or receive care; and
- To help make pregnancy and birth a positive life experience.

As a major component of maternal health care services, the main objectives are as follows:

- To support and encourage a family's healthy psychological adjustment to child-bearing;
- To promote an awareness of the sociological aspects of child-bearing and rearing and the influences that these may have on the family;
- To monitor the progress of pregnancy in order to ensure maternal health and normal foetal development.
- To recognize deviation from the normal and provide management or treatment as required.
- To ensure that the woman reaches the end of her pregnancy physically and emotionally prepared for her delivery.

- To help and support the mother in her choice of infant feeding; to promote breastfeeding in a sensitive manner and give advice about preparation for lactation when appropriate.
- To offer the family advice on parenthood either in a planned programme or on an individual basis.
- To build up a trusting relationship between the family and their caregivers which will encourage them to participate in and make informed choices about the care they receive (Thomson, 1996).

The purpose of ANC is to prevent or identify and treat conditions that may threaten the health of the foetus/newborn and/or the mother, and to help a woman approach pregnancy and birth as positive experiences. To a large extent ANC can contribute greatly to this purpose and can in particular help provide a good start for the newborn child. The purpose was summarized in a study by Prual, De Bernis and El-Joud, (2002) as follows:

i. To screen for three major risk factors which when recognized, lead to specific action: uterine score, malpresentation, premature rupture of membranes;
ii. To prevent and/or detect (and treat) specific complications of pregnancy: hypertension, infection (malaria, venereal disease, HIV, tetanus, urinary tract infection), anaemia and trace element deficiencies, gestational diabetes mellitus;
iii. To provide counselling, support and information for pregnant women and their families (including the partner), concerning: severe signs and symptoms of pregnancy and delivery, community Organisation of emergency transfer, delivery planning.

The authors were of the view that these potentially effective actions will produce more if they are implemented within an organized maternal health system with functional network of delivery units, as was earlier observed by Majoko (2002).

Medical and obstetric implications of antenatal care

The antenatal period presents important opportunities for reaching pregnant women with a number of interventions that may be vital to their health and wellbeing and that of their infants. It also provides an opportunity to supply information on birth spacing, which is recognized as an important factor in improving infant survival. Tetanus

immunization during pregnancy can be life saving for both the mother and infant. For instance, the elimination of neonatal and maternal tetanus in many parts of India is attributed largely to successful intervention through ANC (Muthai, 2005). Antenatal care is also used to deliver intermittent preventive treatment of malaria, though a study in Malawi found poor coverage despite high antenatal attendance (Holtz, Kachur, Roberts, Nkumdula, Chizani, Macheso, and Parise, 2003). The prevention and treatment of malaria among pregnant women, management of anaemia during pregnancy and treatment of sexually transmitted infections (STIs) can significantly improve foetal outcomes and improve maternal health. Adverse outcomes such as low birth weight can be reduced through a combination of interventions to improve women's nutritional status and prevent infections (e.g. malaria and STIs) during pregnancy. A study in Kenya found that offering free insecticide – treated bed nets (ITNs) to pregnant women through ANC clinics is a cost-effective, equitable way to distribute the malaria prevention tool (Guyatt, Corlett, Robinson, Ochola and Snow, 2002). More recently, antenatal period is an entry point for HIV prevention and care in particular for the prevention of HIV transmission from mother to child (WHO, UNICEF, 2003). Rosser (2000) stated that providing good care to women who have HIV/AIDS before, during and after pregnancy could help reduce the spread of HIV, especially between mother and infant.

Surveys indicate that nutritional supplementation could reduce maternal morbidity and mortality (Tomkins 2001; Villar, Ba'aqeel, Piaggio, Lumbiganon, Miguel, Farnot, Al-Mazrou, Carroli, Donnet, Donner, Langer, Nigenda, Mugford, Fox-Rushby, Hutton, Bergsjo, Bekkelein, Berendes, Garcia, 2003), especially among women with early or closely spaced pregnancies (King, 2003). A large study in Nepal found that supplementing reproductive-aged women with vitamin A or beta-carotene reduced maternal mortality by 40 percent (West, Katz, Khatry, LeClerq, Pradhan, Shrestha, Connor, Dali, Christian, Pokhrel and Sommer, 1999). The prevalence of maternal anaemia, a significant problem among pregnant women in developing countries, has not changed significantly despite the initiation of large-scale iron supplementation programmes (Galloway, Dusch, Elder, Achadi, Grajeda, Hurtado, Tavin, Kanani, Marsaban, Meda, Moore, Morison, Raima, Rajaratnam, Rodriquez, and Stephen, 2002). They noted that difficult access and underutilization of ANC services,

inadequate counseling, and distribution of iron tablets among others we eremajor barriers to notable success.

Antenatal care can contribute to reducing the complications of hypertensive disorders of pregnancy (for example, ec eclampsia)among developing-country women. In University of Port Harcort Teaching Hospital, Nigeria, the high maternal mortality observed was common among the unbooked primigravidae who presented late with pre eclampsia/eclampsia (Uzoigwe and John, 2004). A study in another tertiary health institution in Nigeria found that, out of 3,106 deliveries in a two-year period, there were 42 cases of ruptured uterus and virtually all the cases (41) were illiterate and 93% had no ANC (Ekele and Audu, 2000). In a study to identify the socio-demographic and obstetric risk factors for ruptured uterus, another study showed that the incidence rate was 1 in 426 deliveries and being unbooked for ANC was a major factor (Ebeigbe, Enabudoso and Aude, 2005). Levels of perinatal and maternal mortality in the Greater Harare Maternity Unit in Zimbabwe were markedly higher among women who did not book for ANC compared to women who booked (Fawcus, Crowther, Van Baelen and Marumahoko 1992). After controlling for ANC, among teenage mothers and other counterparts, the poor obstetric outcomes of anaemia, preterm delivery, low birth weight and neonatal admissions that were observed were related to their non-utilization of ANC rather than their bilolgical age (Loto, Ezechi, Kalu, Loto, Ezechi and Ogunniyi, 2004).

Data from observational studies in Malawi suggest that those who attended ANC and attend early have better pregnancy outcomes than those who attend late or not at all, although there may be confounding variables (Ellen, 2007). Twenty percent of all mothers who died in the maternal mortality survey of 1997 – 1999 had either missed more than four ANC appointments or booked after 24 weeks. Lack of ANC was cited as a risk factor for maternal death. Ninety-eight percent of all women in developed countries receive ANC leading to as high as 94% of skilled attendance during delivery with timely access to appropriate emergency treatment if complications arise. In contrast, large numbers of pregnant women in Africa and Asia do not receive adequate prenatal care and so lack skilled attendance at birth (Zanconato, Msolomba, Guarenti, Franchi, 2006).

Current status and trends in antenatal care use

Available data during the periods 1990s and 2000 – 2001 showed that most women have some ANC. Over 70% of women worldwide are attended at least once during pregnancy by skilled health personnel (midwife, nurse or doctor). In the industrialized countries coverage is extremely high, with 98% of women having at least one visit. In the developing world, ANC use is around 68% (data was not available for China during the period of the study). Even in the developing countries, coverage was found to be high as about 71% of pregnant women reported visiting antenatal facilities at least once. The rate was highest in East Asia and Pacific (87%) and Latin America and the Caribbean (87%) and lowest in South Asia (54%). In sub-Saharan Africa, generally the region with the lowest levels of health care use, 68% of women reported at least one antenatal visit (UNICEF/WHO, 2002; WHO/UNICEF, 2003). The levels in the remaining regions of the world range from 82% to 86% as shown in table 2.2 below.

Table 2.2. Antenatal care by region

Regions	% women aged 15-49 years attended at least once during pregnancy by skilled health personnel (doctor, nurse, midwife) 1996-2004
Sub-Saharan Africa	69
Eastern and Southern Africa	72
Western and Central Africa	66
Middle East and North Africa	71
South Asia	54
East Asia and Pacific	87
Latin America and Caribbean	87
CEE/CIS	86
World	71

Source: UNICEF Global Database on Antenatal Care (last updated) 2006

Although trend data were not available for all developing countries, analyses of Demographic and Health Surveys of 45 countries showed that in general, ANC had improved steadily rising by more than 20% over the decade (from 53% in 1990 to 64% in 2000). Progress was greatest in Asia, where ANC increased by nearly one third over the period, although this region started from the lowest base. By contrast, in sub-Saharan Africa the increase was only 4%. In the Middle East and North Africa and in

Latin America and the Caribbean, the increases were 10% and 14% respectively (WHO/UNICEF, 2003).

Models and contents of antenatal care

The European/Western model of antenatal care which began as regular check-ups for all pregnant women originated from the United Kingdom and the Northern Island. It later became an integral part of maternity care in the 1920s, some thirty years after the introduction of formalized labour and delivery (WHO, 2003; Chan and Kean, 2004). The traditional risk-approach to care that is still in widespread use today was adapted from this European model. It assumes that more is better in care for pregnant women. Frequent routine visits are the norms and includes 12 – 16 visits to health services by the pregnant woman, as well as provider visit to her home. In its standard form, women visited the clinics once a month for the first six months of pregnancy, once every 2–3 weeks for the next two months, and then once a week until delivery. They were routinely screened with urinary tests for proteinuria and infections, and with blood tests for syphilis, haemoglobin measurements and blood-group typing. Subsequently individuals are classified into high and low- risk categories to determine their chances of complications and the level of care they need (WHO, 2002). Nigeria and other developing countries had adopted this approach without adjusting the interventions to meet the needs of their population, taking into account available resources or evaluating the scientific basis for specific practices (Stephenson, 2005; Madubuike, 2007).

The first booking visit, in the standard European model, focuses on taking a detailed social, family medical and obstetric history, carrying out a complete physical examination, and making a risk assessment that requires a broad range of laboratory tests. Subsequent visits include simple examinations, though some examinations are still conducted at every visit. Later in pregnancy, examinations focus on the status of the developing foetus and the preparation for a safe delivery (WHO, 2003). Although this model is still in use in many countries, research has discredited its use on the grounds that it fails to predict who will go on to develop complications of pregnancy and delivery. Thus, following the results of two main randomized trials in the

developing countries, a new ANC model that is better, cheaper, faster, and more evidence-based was recently developed by WHO (Villar, Carroli, Khan-Neelofur, Piaggio, Gülmezoglu, 2001; WHO, 2003; Stephenson, 2005; Ellen, 2007).

Overview of the new WHO antenatal care model

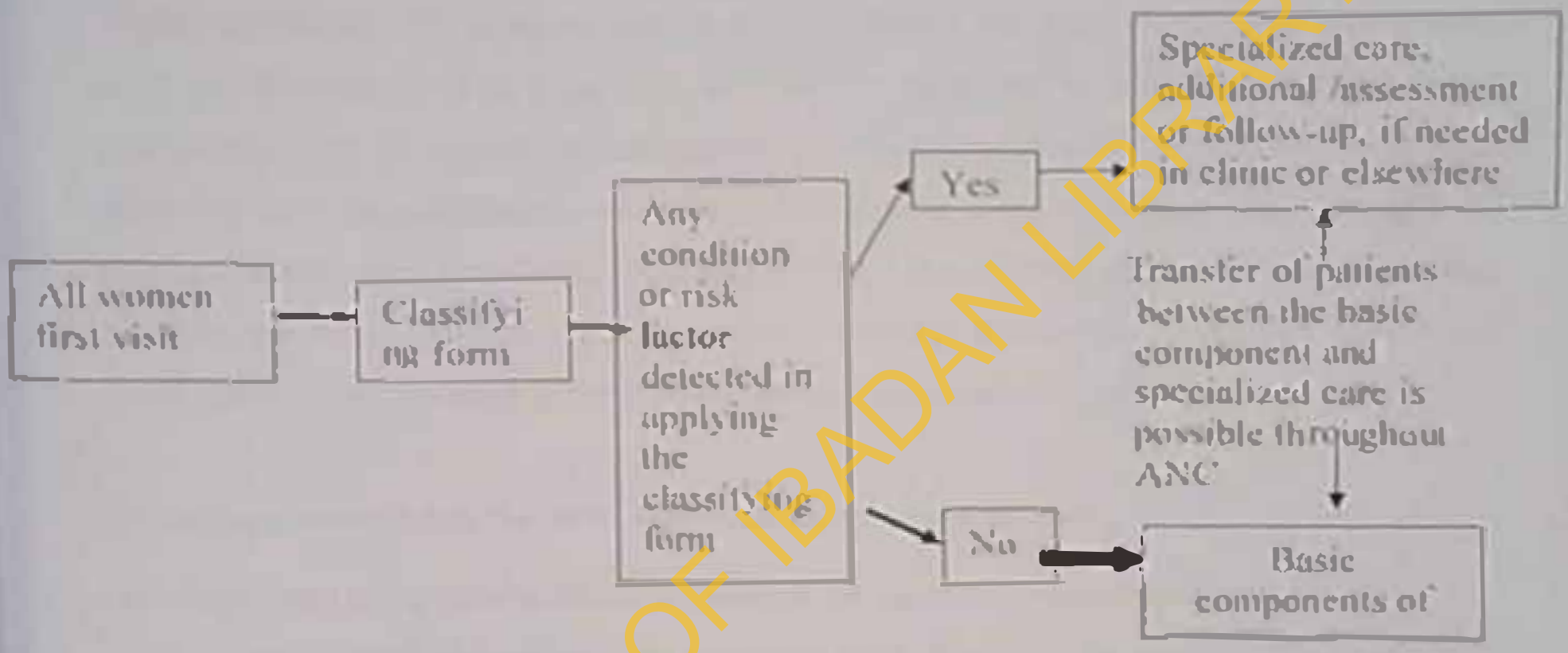


Fig. 2.1: The new WHO antenatal care model

Source: Manual of the New WHO antenatal care model (WHO, 2002)

The new ANC model developed by the WHO is represented diagrammatically in figure 2.1 above. The main characteristics of the new protocol were reduction in the number of visits with an evidence-based set of contents, and the provision of accurate information to women to identify warning signs and encourage preventive behaviour. Screening for risk factors is no longer the focus rather, all pregnant women, on their first visit to the facility, are evaluated using pre-set criteria known as the classifying form. The purpose of this is to see if they require special care for existing medical conditions. By this pregnant women are divided into two groups:

i. Those eligible to receive routine ANC (called the basic component), and
ii. Those who need special care based on their specific health conditions or risk factors.

Women considered not to be at-risk or having existing medical conditions are offered the basic component of the new model. They are considered not to require any further assessment or special care at the time of the first visit regardless of the gestational age at which they start the programme. On the other hand, those requiring special care are not eligible for the basic component rather they receive treatment for their specific condition and are still included in the intervention group.

Activities in the basic component of the new model include: screening for health conditions likely to increase the risk of specific adverse outcomes; therapeutic interventions known to be beneficial; and alerting pregnant women to emergencies and instructing them on appropriate responses. Clinics employing the new WHO model are provided with the resources necessary to implement these activities. The strengths of this new WHO model are in the fact that it limits the number of visits to the clinic and restricts the tests, clinical procedures and follow-up actions to those that have been shown to improve outcomes for women and newborns (WHO, 2002).

Principles underlying the new WHO antenatal care model

The following principles underlie the new WHO antenatal care model:

1. An ANC model should include a simple form that can be used easily to identify women with special health conditions and/or those at risk of developing complications; such women need to be referred to a higher level of care.
2. The identification of women with special health conditions or risk factors for complications should be done very carefully. Such women should be refered to higher levels of care only when the higher levels of care are known to have the expertise to deal with their specific health care needs.
3. Health care providers should make all pregnant women feel welcome at their clinic. The opening hours of clinics providing ANC should be as convenient as possible for women to come to the clinic. It has been shown that the number of women seeking ANC in clinics increases proportionally with increases in hours of operation of those clinics. Health care providers should make every effort to keep their appointments with women in order to reduce patient waiting time. However, women who come without an appointment should not be turned away even when there is no emergency. As far as possible, any required interventions (for treatment) or tests

should be done at the women's convenience, for example, on the same day of the woman's visit.

4. Only examinations and tests that serve an immediate purpose and that have been proven to be beneficial should be performed. For example, there is justification for performing a specific test only one during pregnancy, it should be performed at the most appropriate time, that is, when an intervention is possible in case the test result is abnormal.
5. Whenever possible, rapid and easy-to-perform tests should be used at the antenatal clinic or in a facility as close as possible to the clinic. When test results are positive (e.g. positive for syphilis), treatment should be initiated at the clinic the same day (WHO, 2002).

The Focused Antenatal care

To promote the health and survival of mothers and babies, some countries have adopted the WHO goal-oriented focused ANC (FANC) (Birungi and Onyango-Ouma, 2006). Here, the emphasis is on quality of care rather than the quantity. For normal pregnancies therefore, only four antenatal visits are recommended. Two important realities are taken into consideration namely:

i. Frequent visits do not necessarily improve pregnancy outcomes, and in developing countries, they are often logistically and financially impossible for women.
ii. Many women who have visit factors never develop complication, while women without visit factors often do so, when ANC is planned using a visit approach, scarce healthcare resources may be devoted to unnecessary care.

Therefore every woman should receive the same basic care and monitoring for complication.

The major goal of FANC is to help women maintain normal pregnancies through:

- Identification of pre-existing health conditions
- Early detection of complications arising during the pregnant
- Health promotion and disease prevention
- Birth preparedness and complication readiness planning.

• Identification of Pre-existing Health Conditions: As part of the initial assessment, the provider talks with the woman and examines her for signs of chronic conditions

and infectious diseases. Pre-existing health conditions such as HIV, malaria, syphilis and other sexually transmitted diseases, anaemia, heart disease, diabetes, malnutrition, and tuberculosis may affect the outcome of pregnancy, require immediate treatment, and usually require a more intensive level of monitoring and follow-up care over the course of pregnancy.

- **Early Detection of Complications arising during the pregnancy:** The provider talks with and examines the woman to detect problems of pregnancy that might need treatment and closer monitoring. Conditions such as anaemia, infection, vaginal bleeding, hypertensive disorders of pregnancy, and abnormal fetal growth or abnormal fetal position after 36 weeks may be or become life-threatening if left untreated.
- **Health Promotion and Disease Prevention:** Counselling about important issues affecting a woman's health and the health of the newborn is a critical component of FANC. Discussions should include: how to recognize danger signs, what to do, and where to get help, good nutrition and the importance of rest, and hygiene and infection prevention practices. Other issues for discussion are risks of using tobacco, alcohol, local drugs, and traditional remedies, breastfeeding and postpartum family planning and birth spacing. All pregnant women should receive as preventive interventions, immunization against tetanus and iron and folate supplementation. In areas of high prevalence women should also receive: presumptive treatment of hookworm, voluntary counselling and testing for HIV, protection against malaria through IPT and ITNs and protection against vitamin A and iodine deficiencies.
- **Birth Preparedness and Complication Readiness:** Approximately 15 percent of women develop a life-threatening complication, so every woman and her family should have a plan for:
  - A skilled attendant at birth
  - The place of birth and how to get there including how to obtain emergency transportation if needed
  - Items needed for the birth
  - Money saved to pay the skilled provider and for any needed medications and supplies
  - Support during and after the birth (e.g., family, friends)
  - Potential blood donors in case of emergency

Implementation of focused antenatal care: The WHO ANC package is designed as a job aid for ANC provider[illegible] should be used. Instruments for use are needed

to implement the package. To introduce the package into practice may require, depending on the country, updating national clinical standards and guidelines for ANC, modification of pre-service training curricula in ANC, in-service training for ANC providers and their supervisors, and a thorough assessment and plan for making changes in drugs, equipment, and supplies needed to implement the package. USAID-funded programmes have developed model standards and guidelines that can be adapted to local conditions. Likewise, training modules and curricula exist to help providers update their knowledge and skills (Stephenson, 2005).

Frequency and timing of antenatal visits

In all models, early initiation of ANC is important in many ways, namely: to prevent and treat anaemia, to screen and treat syphilis, and to identify and manage women with medical complications. Early care also allows for the development of interpersonal relationships between health care providers and the pregnant woman so that her particular needs and wants are known and expressed in a plan for delivery. The World Health Organisation recommends a minimum of four antenatal visits, scheduled at specific times in the pregnancy to accomplish the essential level of ANC. In their study, Prual, De-Bernis and El-Joud (2002) showed that these four antenatal consultations would be enough if appropriately timed at 12, 26, 32 and 36 weeks of pregnancy. However, this is only a minimum requirement. More visits may be necessary depending on the woman's condition and needs. The optimal number and content of antenatal visits is well specified in the WHO new model of ANC in which the style of care described requires a type of interaction between the woman and her health care provider that takes more time than has previously been available in many of the world's overcrowded clinics.

The initial/booking visit

The initial booking visit is the first visit made by a pregnant woman to an organized maternity service. The term 'booking' comes from the days when women literally had to book themselves a hospital bed for labour. Oftentimes, it is the woman's first introduction to the team that will care for her during the period of pregnancy (Thomson, 1998). The booking visit is a very important component of ANC and is significant in many ways. A baseline data on the woman's health is established, a full workup is done and the stage is set for a continuing relationship between the woman

and her healthcare provider. Subsequent visits are then made according to the need of the individual – fewer visits for low risk women and a more frequent visit for high risk women (Katharyn and Mahlmeister, 1989; Gharoro and Igbafe, 2000).

According to the new WHO model, duration of the initial visit lasts between 30–40 minutes for an individual woman and is expected to meet the following objectives:

- To assess levels of health by taking a detailed history and to offer appropriate screening tests.
- To ascertain base-line recordings of blood pressure, urinalysis, blood values, uterine growth and foetal development to be used as a standard for comparison as the pregnancy progresses
- To identify risk factors by taking accurate details of past and present midwifery, obstetric, medical, family and personal history.
- To provide an opportunity for woman and her family to express/discuss any concerns they might have about the current pregnancy and previous pregnancy loss, labour, birth or puerperium.
- To give public health advice and that pertaining to pregnancy in order to maintain the health of the mother and the healthy development of the foetus.
- To begin building the foundation for a trusting relationship in which the woman and midwife are partners in care (Viccars, 2003).

Ideally, the first visit should occur in the first trimester, around, or preferably before, week 12 of pregnancy (WHO, 2002). Women presenting later than this date are deemed to have booked late (Ebeigbe and Igberase, 2005). However, regardless of the gestational age at booking, all pregnant women coming to the clinic for ANC are enrolled and examined according to the norms of the first and subsequent visits. Kupan (2005) noted the importance of early reporting for care during pregnancy, stating that ANC can be more effective in preventing negative pregnancy outcomes when it is sought early enough in the pregnancy and continued through delivery. In his opinion, booking beyond the first trimester negates the objectives of the programme, and the period may likely become missed opportunities for other important programmes that contribute to improved health of the woman and her foetus even beyond pregnancy e.g. malaria, tetanus, tuberculosis, and nutrition interventions. Supporting the above submission, a community-based survey on women's use of

antenatal services and delivery care in rural western Kenya which showed that among 570 women who could recall the number of tetanus doses received, 97% received at least one dose, 46% received only one dose, 43% received two doses, and 8% received three doses. On the contrary, five doses are considered appropriate to confer life-long immunity (van Eijk et al., 2006). Most women (64%) in the study first visited the facility in the third trimester.

Antenatal Care in Four Resource Developing Countries

Antenatal care has been implemented in developing countries according to the same mode as applied in industrialized countries with little adjustments for local conditions (Prual, et al; 2002). Availability and use of ANC services were shown by several studies to be high even in low resourced developing countries. In rural western Kenya, a community-based survey on use of antenatal services and delivery care among women showed that of the 635 participants, 90% visited the antenatal clinic at least once during their last pregnancy (median number of visits was four), most women (64%) had their first visit in the third trimester. Eighty percent of women delivered outside a health facility; TBAs assisted 62%, laypersons assisted 36%, while 22% received no assistance (van Eijk et al. 2006). Ramarao, Caleb, Khan, and Townsend (2001), examined utilization of maternal and child health services and the readiness of primary health care (PHC) facilities to provide maternity services to determine why the state of Uttar Pradesh continued to have one of the highest levels of maternal mortality in the country. Less than half of pregnant women in rural Uttar Pradesh sought any ANC, almost 90 percent of deliveries took place at home, and nearly half were attended by family or relatives.

Regarding the number and timing of antenatal visits, the majority of women presenting for any ANC have at least four visits, which measures up to the minimum number of visits recommended by the WHO for a low risk / normal pregnancy. In Nepal however, 38% of women reported at least one visit but only 9% reported four or more visits. Most women had two or three antenatal visits (AbouZahr and Wardlaw, 2003). However, it was noted that though most pregnant women in Sub-Saharan Africa made up to four antenatal visits like many regions, most women came for ANC late in pregnancy (WHO, 2004). Most women are likely to wait until the second trimester and a relatively substantial proportion present only in the third trimester. The median

estimated gestation at booking reported by participants for the current pregnancy in a South African study was 20 weeks with a range of 12 to 32 weeks (Myer and Harrison, 2003). In another study, only 62 women (21%) attended during the first trimester. Most women (47%) only attended during the third trimester. The follow up pattern showed that 94% came for a subsequent visit – 77% thrice, 76% four times, 74% five times and 73% six times (Peltzer and Ajeghomogun, 2005).

According to Myer and Harrison (2003), widespread availability of free ANC services in rural South Africa was not a factor for early clinic attendance. The median gestation of first booking in rural health districts of Hlabisa, KwaZulu-Natal was approximately 25 weeks and significant proportion of women who sought ANC did not return for any follow up. Similarly, in Zimbabwe only 21.6% of ANC attendees started in the first trimester and 62% made five or fewer antenatal visits (Kambarami, Chirenje and Rusakaniko, 1999).

Antenatal care in Nigeria

The standard recommended number of antenatal visits in Nigeria is according to previous protocols and concern monthly visits up to 28 weeks of pregnancy, followed by bi-weekly visits to the 36th week of pregnancy and weekly afterwards to delivery. If for any reason the woman cannot make the recommended number of visits, the minimum of four visits are to be made at the 10th, 20th, 30th, and 36th weeks of pregnancy. Apart from these routine visits, the policy recommends that pregnant women report to a clinic anytime they feel unwell and that the first antenatal visit be made as early as possible, as soon as the woman thinks she is pregnant. During the ANC visit, the development of the pregnancy is to be monitored, health advice given, health hazards such as anaemia, hypertension and infection screened for and, if necessary, treated and tetanus immunization administered (FMOH/USAID/COMPASS, 2006).

Comparison of the 1999 and 2003 NDHS results showed a decline in the proportion of women who received ANC from health care professionals in recent times compared to four years back. Whereas 63.6% of women received antenatal either from a doctor, nurse midwife or auxiliary midwife in the three years preceding the 1999 survey, 58.8% of mothers received ANC from a doctor, nurse, midwife, auxiliary midwife,

or CHEW in the three years preceding the 2003 survey. Over an eight-year period between 1995 and 2003, the average coverage of ANC stood at 58% and only 35% of deliveries in Nigeria had skilled attendance (UNICEF, 2003).

The above picture has remained unchanged as shown in the results of the NHDS 2008. Fifty eight percent of women still receive some ANC from a skilled provider, from a nurse or midwife (30%) or a doctor (23%). Only 31% of women in the North West zone received any ANC from a skilled provider compared with 87% of women in the South East and South West zones. Forty-five percent women had the recommended four or more ANC visits, but only 16% of women had an antenatal care visit by their fourth month of pregnancy, as recommended. More than one-third of women (36%) received no antenatal care (NHDS, 2008).

In one rural community in Southwestern Nigeria, 88% of the study participants sought ANC from trained personnel during their last pregnancy while 12% did not. As a result, 45% of women took iron tablets or syrup during their last pregnancy; 10% took intestinal parasite drugs. Six in ten women (60%) who received ANC were informed of the signs of pregnancy complications. About half of women's most recent births were protected against neonatal tetanus (Bawa, Umar and Onadeko, 2004; NHDS, 2008).

Just as several studies show that utilization of modern ANC is generally poor in most parts of the country, health seeking behaviour among women of child bearing age falls short of expectation, particularly among teenagers. One study found a 79.9% incidence of late booking with a mean gestational age of booking at 23.1 weeks. Only about a fifth (20.1%) of the study population booked in the first trimester, 44.9% in the second and 35.0% in the third trimester (Ekele and Audu, 1998; Gbamo and Igbafe, 2000). According to Okunlola, Ayinde, Owonikoko, Ontigbolun, (2006), in a tertiary hospital in southwestern Nigeria among 205 women who attended the ANC booking clinic, mean gestational age at booking was 21.82 (± 7.0) weeks. Only 29 (14.1%) booked before 14 weeks. In a cross-sectional study in Shagamu also revealed a mean gestational age at booking of 21.4 ± 5.1 weeks among 2,084 participants (Lamina, 2004). In the Niger Delta area, 79.9% of the study population booked late for antenatal care (Ekele and Igberase, 2005). Also, results of another study interviewing 378 consecutive pregnant women utilizing ANC in urban tertiary health facility in Benin City, the mean gestational age at booking was 23.7 weeks. The peak period for

initiating antenatal care was six months i.e. in the second trimester of pregnancy (Gharoro and Igbafe, 2000).

The proportion of Nigerians with access to health care services has been put at 56.5 % (WHO, 2003). Less than half of pregnant teenagers (48.7%) received ANC from a health professional compared to 61.2% of pregnant women of age 20-34, and 60.7% of those above 35 years of age in five years preceding the 2003 survey (FMOH/UNFPA, 2004). What are the factors influencing the health-seeking behavior of women towards receiving ANC and the choice of where the care is received? In Nigeria, women receive ANC from the following sources: public health facilities, private health facilities, missionary homes and TBAs. The total number of health facilities in Nigeria by the year 2000 was 23,676 (data for Ebonyi State was not available). Thirty-seven percent of this number was privately owned. In terms of service delivery, less than half (49.8%) of the 13,211 PHC facilities in the country provided ANC while 42.9% and 43.9% respectively, provide delivery and postnatal services (FMOH/WHO,2002). The source also revealed that almost three-fifths (58.2%) of the PHCs offering ANC and delivery services have been recently documented as having no midwife, while 17% have neither a midwife or a senior CHEW. The northern zones are even worse affected than the southern zones.

Studies also show that in Nigeria women who book especially in government facilities concurrently use multiple ANC care givers – both formal and informal. Results of 200 randomly selected women attending two booking clinics in a tertiary institution in Ibom also showed that 25% and 30.5% respectively from the two clinics were concurrently using formal and unorthodox ANC care givers (Adeoye, Ogbonnaya, Umeobah and Asiegbu, 2005). It has also been recorded that another determinant of the ugly maternal mortality situation in Nigeria is increasing number of deliveries outside hospital environment. Even booking for and attendance to ANC facilities was not found to be associated with delivery in hospital. Ezechi, Fasubaa, Obiesie, Kalu, Loto, Dubuh and Olopola, (2004) found that 12.8% out of 9,515 women defaulted from hospital delivery over a five year period in a tertiary institution, southwest Nigeria.

Factors influencing utilization of antenatal care

Researchers have investigated the factors associated with use of ANC (Magadi, Madise, Rodrigue. 2000; WHO and UNICEF. 2003). Studies conducted locally and internationally suggest that factors like costs, socio cultural beliefs, levels of education, and place of residence (urban or rural) are of import (AbouZahr and Waldlaw, 2002; FMOH, 2004; World Bank, 2007).

Affordability: Poor women have limited access to appropriate information and health services. Oftentimes, direct service fees as well as the fees associated with transportation, drugs and supplies in many settings strongly influence the utilization of maternal-newborn health services. Exemption mechanisms rarely work properly. This is particularly the case for delivery and other pregnancy related emergencies. The unpredictability of real costs for pregnancy and the possible complications deter the poor from seeking skilled attendance. Opportunity costs of sickness and treatment is onerous on poor people who depend on daily wages. High out-of-pocket expenditures on health care force families to slide into poverty because the majority of poor women lack health insurance (World Bank, 2007).

In their study titled *Understanding users perspectives of barriers to maternal health care use in Maharashtra, India*, Griffiths and Stephenson (2001), found that socioeconomic status was not a barrier to maternal health service use if women perceived the benefits of the service to outweigh the cost, and if the services were within reasonable distance of the woman's home. They further demonstrated that many women thought private services were superior to public services, but their use was often prevented by their higher cost. Even when services are provided, they may not be used because women have to perceive that using services will benefit them and their unborn child before they will use them. Also a good number of women, even if they received ANC services at a facility, preferred to deliver at home in a familiar environment, often with the assistance of someone known to them.

Socio cultural beliefs: Cultural norms and practices may negatively impact on maternal health. The perceptions of health and risks during pregnancy, birth and postpartum/newborn period strongly influence both health-seeking behavior and appreciation of the quality of the available services. In Mozambique, women's fear of

witchcraft encouraged them to hide pregnancies and delay ANC to protect themselves and their children (Chapman, 2003). In Nigerian rural communities women did not seek ANC because of lack of financial resources, God's will and husband's denial (Adamu and Salihu, 2002). Most of the participants in a study among the Ahiara women, southeast coast Nigeria, felt hospitals generally connote sickness and were places reserved for only sick people. The most common causes of maternal death highlighted by the participants were spiritual attack from enemies and punishment by the Gods for infidelity. Thus suggestions made by the participants to reduce maternal death included, education of women on the need to be faithful to their husbands, acceptance of Christianity by all women and total surrender to God during pregnancy (Umoiyoho, Abasiattai, Udonia and Etuk, 2005). Women in Hoima, a rural community in Uganda, rely on traditional birth practices because they were familiar and accepted, pregnancy is viewed as a test of endurance, and maternal deaths are a sad, but normal event. Lack of skilled staff at the PHC level, complaints of abuse of patients, neglect and poor treatment in the hospital, poorly understood reasons for procedures, lack of money to pay for care and medicines, and health workers' views that patients are ignorant were the reasons given for the unwillingness of women to deliver in facilities (Kyomuhendo, 2003).

Level of education: Investigations have demonstrated that there is a strong association between level of women's education and use of maternal health services. Data analysis of surveys carried out in 45 countries confirmed that in developing countries as a whole, educated women are more likely to receive ANC and the likelihood of their using ANC is associated with their level of education (WHO, 2003). In a national malaria knowledge, attitudes, and practices survey in Malawi by Schultz, Steketee, Chitsulo, Macheso, Nyasulu, and Eiting (1994), the woman's level of education was the only significant predictor of initiating ANC, continued ANC attendance, and delivery in hospital. Another survey showed that 30% of those with no level of education, 46% of those with primary education, 68% of those with secondary education and 85% of those with higher education made at least four ANC visits (Mbizvo and Wardlaw, 2002). Educational status is not only a factor to ANC initiation but also to choice of place of care and delivery (Bawa, Umar and Onadeko, 2004).

In a study in Nigeria titled *Determinants of utilization of ANC services in Kombosu village Kano, Nigeria* in which 200 pregnant women were interviewed 86% had secondary education, all (100%) of those with post secondary education and 83% of those with husbands with post secondary education utilized ANC (Kabir,Iliyasu, Abubakar, and Sani, 2005). Using 60 participants in an experimental study to ascertain if a new approach to ANC can improve knowledge of pregnant women about its benefits in Indonesia, the investigators demonstrated that improvement of knowledge in the intervention group was significant particularly in the knowledge about healthy pregnancy, pregnancy complications, safe birth and taking care of the newborn. The improvement of knowledge was significantly influenced by educational back ground and socio-economic status of the respondents (Nuriani and Parker, 2005). However, Ikeako, Onah and Iloabachie (2006), noted that though formal education was still a significant predictor of use of orthodox maternal health services, the depressed Nigerian economy since 1986 had marginalized the benefit of education with the result that educated women stopped making use of existing health facilities because they could not afford the cost of health services.

Place of residence: Analysis of data from 23 Demographic and Health Surveys in sub-Saharan African countries from the 1990s, revealed that poor urban women appeared to receive worse maternal health care than their urban non-poor and rural counterparts. The urban poor were more likely to begin ANC later, make fewer visits to a health facility during pregnancy, and receive non-professional delivery care than urban non-poor. Though these results were not uniform across countries, the data indicated that the disadvantages of urban poor relative to non-poor in terms of antenatal and delivery care is worse in countries where indicators showed better overall maternal health. The urban poor in these countries fare worse than rural women, indicating that improvements in maternal health care have not benefited urban poor women (Magadi et al., 2003). Delays in seeking and obtaining quality maternity care resulted in high maternal mortality in Kalaba, Zambia because according to one study distance, lack of transport, user fees, lack of adequate health education during ANC, inadequate staffing, and poorly equipped clinics were barriers to early attendance (Nickelenburg, Kyanamina, Mukelabai, Wolffers, and van Roosmalen, 2004).

Quality of services: The quality of services is another major factor to utilization of maternity services such as ANC. Quality of care, according to Jain, Bruce and Mesch (1992), is the way the health system treat the patient; or as Kols and Sherman (1998) defined it, providing good quality services involved in offering a range of services that is safe and effective and that satisfy clients' needs and wants. A study in rural Nepal found that the quality of services at health posts and the presence of village outreach workers, not the quality of facilities were the strongest determinants of use of ANC services (Acharya and Cleland, 2001). Similarly, a study in Cape Town, South Africa found that women's attendance of antenatal clinic was influenced by their perception of the quality of care, and the perceived benefits and risks of ANC (Abrahams, Jewkes, and Mvo, 2001). On the other hand, women cited poor quality of care at government facilities as a reason to deliver at home in the Griffiths and Stephenson study.

In Nigeria, reports of Performance Factor special Studies and Performance Needs Assessment in 2003 showed that the service delivery skills of most Nigerian health care workers were poor. In terms of professional conduct and attitudes, many Nigerians, particularly the poor, vulnerable and rural dwellers face a lot of humiliation from unethical practices of health workers who exploit them financially, and abuse them verbally and psychologically. In a recent national study, community-based respondents reported that the behaviour of health workers was a major factor that discouraged them from using modern health facilities even for emergency obstetric conditions (FMOH and UNFPA, 2003). This is supported by a study by Osubor, Fatusi and Chiwuzie, (2006) which found that only 15.7% of respondents preferred to use government facility as opposed to 37.3% and 25.5% who preferred private facility and TBA, respectively. Irregularity of staff at work, poor quality of service, and high costs were the major reasons given for the low patronage. Of the 13 women who died in the Ozumba and Nwogu-Ikojo study (2008), 23.4% and 4.3% experienced substandard care from general practitioners and midwives, respectively.

Results of a household survey which assessed community satisfaction with the quality of maternal and child health services in southeastern Nigeria revealed that most respondents rated the services to be at least good, were satisfied with the services (childhood immunization, ANC and childbirth services), showed willingness to pay for the services if drugs were readily available and would pay if there was overall

improvement in the quality of the services (Uzochukwu, Onwujekwe and Akpala, 2004). However, long waiting queues, providers' behaviours and lack of doctors militated against the utilization of those services.

Perceived need for antenatal care

Pregnancy is a natural process and women with some experience might consider ANC less necessary. Horchkiss (2000) reported that a higher number of previous pregnancies is associated with less use of ANC, and Magadi et al. (2000) reported a negative correlation between parity and early attendance to ANC. However, some other report had found that complications experienced during earlier pregnancies have a positive effect on early attendance to ANC. This suggests that knowledge of possible complications makes women more aware of the need for ANC.

Other personal characteristics

Religion and ethnicity have also been attributed to have an influence on the attitude of women towards pregnancy and modern health care and can thus have an effect on ANC use. Addai (2000) reported a positive association between being Catholic and the use of ANC in Ghana and a negative with having a traditional religion, while ethnicity showed no significant effect. In this vein, a negative effect of being Muslim on ANC use was reported in Thailand (Overbosch, Nsowah-Nuamah, van den Boom and Dammyag, 2004).

Factors influencing gestational age at reporting

Several studies have also demonstrated that many factors influenced pregnant women's gestational age at first reporting. A survey of information on personal data, index pregnancy, reasons for booking at a particular gestational age, past obstetric and medical history of 205 pregnant women attending the antenatal booking clinic at a tertiary hospital, southwest Nigeria, found that the mean gestational age at booking was 21.82 ±7.0 weeks. Only 14.1% of clients booked before the 14th week. The reasons given for early booking among them were the perceived benefits of such practice (41.4%), physician's recommendation (34.5%) and occurrence of complications in previous pregnancy (24.1%).

A comparative study on demographic and obstetric characteristic of early and late attendees in a rural setting in Niger Delta, Nigeria found that there was no significant

difference in the age, parity, and level of education, social class, previous foetal loss, and previous obstetric complications between the two groups. Seventy-nine percent of the study population booked late for care. The mean gestational age at booking was 23.1 ± 10.1 weeks with a range of 6 – 39 weeks. Only about a fifth (20.1%) booked in the first trimester, 44.9% in the second and 35.0% in the third trimester (Ebeigbe and Igberase, 2005). The only factors found to significantly favour early booking were illness in the index pregnancy and multiparity (Okunlola et al, 2006). Age and education were significant factors related to practice in Adeoye, et al study. This finding negates the study by Charoro and Igbefe (2000) which found that the number of mothers booking declined with increasing parity. In their study, late booking was as a result of ignorance and financial constraints rather than parity.

In a community-based survey in rural western Kenya, where 9 out of 10 women reported at least one ANC visit during their last pregnancy, two- thirds of these women began attending ANC in the third trimester. A perceived lack of quality in the ANC was associated with a late first ANC visit in the study (van Eijk et al., 2006).

The value of formal education on ANC attendance was revealed in several studies. Findings of a prospective study in Guinea Equatorial using 200 participants showed that more women who had formal education tended to attend ANC clinic earlier and were more likely to follow instructions given by the attending doctor or midwife (Umoh, 2003). From the study, hospital workers (50.73%), husbands (14.71%) and parents (13.9%) had a lot of influence on ANC attendance whilst farming season (18.97%), fear of delivery and treatment (13.05%), conveniences (10.93%), reduction in number of antenatal visits (9.75%) were the factors that mostly influenced the time of registration for ANC care. Poor obstetric history, previous obstetric complications and advice by the ANC staff made more women to book early, while reduction in the number of visits, traditional practice and distance were responsible factors for registration in the third trimester. Most of the women (93%) believed that they derived benefits from the ANC rendered and 98% of them considered the ANC services offered as acceptable. They was corroborated by the findings of latter study by the same author which showed that the higher the formal education a women had, the less likely she was to book late in pregnancy. Contrarily, a study in southwest Nigeria cited

significant difference between the gestational age at first attendance for the literate subgroup (21.7 ± 4.2 weeks) and that for the illiterate subgroup (20.8 ± 4.5weeks). Seventy two percent of cases gave no specific reason for choosing the time of antenatal booking (Lamina, 2004).

In urban Riyadh, Saudi Arabia, women were found to report early for ANC. The average gestational age at booking was 13 weeks; the number of antenatal visits during the current pregnancy was six and a high (97%) level of awareness of the importance of ANC visits was observed. Various demographic characteristics were found to relate with pattern of ANC uptake among the study population. Level of education of both husband and wife and poor obstetric history significantly affected gestational age at booking, while the family income and gestational age at booking affected the number of antenatal visits. The respondents' most striking reason for non-compliance was related to accessibility to health centre. Twenty three percent thought that the health centres were far away from their residence and they needed to involve the husbands in driving them to health centres (al-Shaiman, Khoja and Jarallah, 1994).

Most pertinent studies on the risk profile of women booking late or not booking at all to ANC have shown that the most common barriers to attendance at ANC in modern Western society are lack of insurance, low income, low educational level, low social class, unmarried status, ethnic origin of the woman, difficulties in obtaining appointments and long distances (Rantakaiten, Heiskanen, and Heinonen, 2007).

Improving utilization of antenatal care services

Delay in seeking care may likely lead to increased risk of morbidity and mortality among women of child-bearing age but positive obstetric health seeking behaviour does significantly affect the outcome of pregnancy. The following have been found to improve accessibility of maternal health services in both rural and urban communities:

Women empowerment/education: Measures that promote education and economic empowerment of women and the utilization of modern ANC were likely to reduce the prevalence of maternal deaths in a community (Ebeigbe, Enabudoso and Anie, 2005). Ebeigbe and Igberase (2005) suggested that community-based health education

programmes on the importance of early presentation for ANC needed to be put in place to address the anomaly of late utilization of ANC in Nigeria.

Availability of resources: According to Anand and Barnighausen (2004), investing in human resources for health must be considered as part of a strategy to achieve the MDGs of improving maternal health and reducing child mortality. In their cross-country regression analyses, they demonstrated that the density of human resources for health is not only significant in accounting for maternal mortality rates but also for infant and under-five mortality rates. Uzochukwu et. al., (2004) noted that Bamako initiative programme improved availability and physical appearance of the health centres thereby leading to high levels of consumer satisfaction and people's willingness and ability to pay for PHC services. It was therefore suggested that continuous improvement of services, especially constant drug availability should be maintained in order to motivate people to pay for services.

The role of men in maternal health: Men as the heads of households and major maternal and sexual health decision-makers occupy a strategic place in reproductive health of women. Consequently, men's social and financial supports for women during pregnancy and childbirth have profound and positive impact on maternal outcomes. The changes needed to men's roles have been shown to be within the context of changes in the culture, religion gender and societal norms relating to women's health. Provision for the expectant fathers to attend maternity care activities will improve antenatal services uptake (Gharoro and Igbafe, 2000).

Legislation: Effective laws governing contracts or payments to health providers have been found to be useful in improving uptake of healthcare services by women, for instance, measures to avert industrial actions by health workers are could improve quality of care that women receive. The training, licensing, accreditation, and continuing medical education for all health providers could be legislated and periodically reviewed. Creating the information and environment that encourage responsive legislation requires the dissemination of information on maternal health to parents, community leaders, politicians, legislators, investigators, and the general public from time to time. Legislation on compulsory free education for all, including girls, and on the minimum age of marriage of not less than 18 years of age will go a

long way in reducing the major determinants of poor maternal health. The provision of free maternity care for all women and liberal maternity leave for pregnant women could be a complimentary strategy for reducing maternal mortality and morbidity.

Conceptual framework

Analysis of this study was based on the concept of the Health Belief Model (HBM) to aid understanding of major issues regarding ANC utilization among women of child-bearing age.

The Health Belief Model

Propounded by Kurt Lewin and further developed by Rosenstock in the 1950s, the HBM attempts to explain preventive health behaviours particularly in relation to utilization of health services such as a screening programme like antenatal care (Ross and Mico, 1980). It addresses an individual's perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). Simply put, the authors adduced that people's beliefs about whether or not they were susceptible to disease, and their perceptions of the benefits of trying to avoid it, influenced their readiness to act.

Constructs of the model

Six main constructs influence people's decisions about whether to take action to prevent, screen for, and control illness. In order words, people are ready to act if they:

- Believe they are susceptible to the condition (perceived susceptibility)
- Believe the condition has serious consequences (perceived severity)
- Believe taking action would reduce their susceptibility to the condition or its severity (perceived benefits)
- Believe costs of taking action (perceived barriers) are outweighed by the benefits
- Are exposed to factors that prompt action (e.g., a television ad or a reminder from one's physician to get service) (cue to action)
- Are confident in their ability to successfully perform an action (self efficacy)

It is important to note that personal susceptibility to a disease condition as well as perceived seriousness of the disease varies from person to person. The perception is

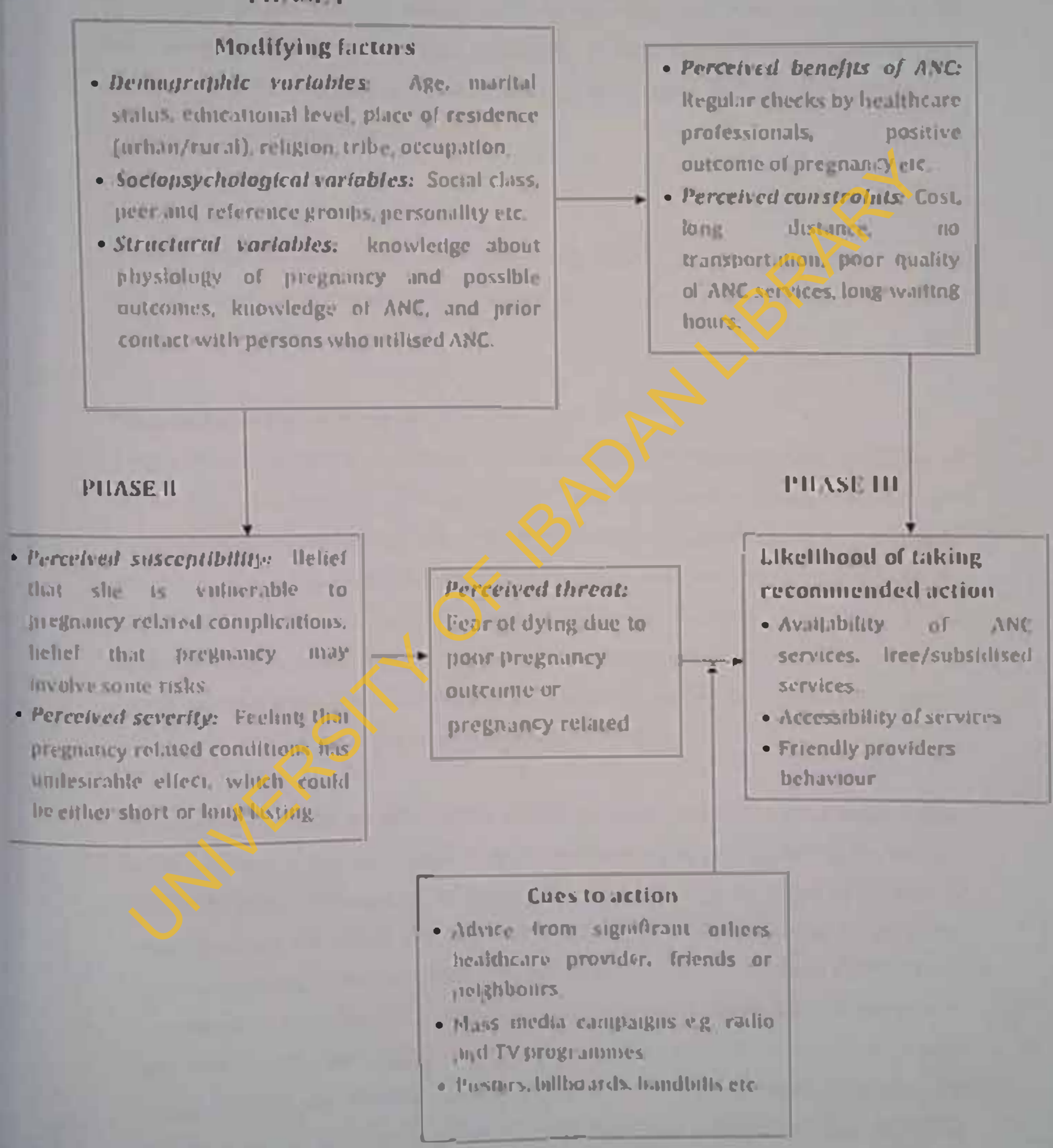
also dependent on the level of knowledge about the health problem – the modifying factors which includes the demographic, socio psychological and structural variables. These modifying factors impinge on the level of knowledge and also awaken or subdue threat to take recommended action. Modifying factors enable the individual to evaluate the outcome expected in relation to the constraints. Where the benefits clearly outweigh the constraints, the individual is motivated to take recommended action. Individuals must be able to recognize certain important cues that prompt him/her to take necessary action (Gbefwi, 2004; National Institutes of Health, 2005).

Antenatal care as a preventive/screening programme often identifies people who are at high risk for pregnancy and delivery complications even when they are well. Because they do not feel sick, they may not initiate care early in pregnancy or adhere to instructions to return for any follow up. The health care seeking behaviour of reproductive age women and ANC programme is illustrated in figure 2. According to the HBM, in settings where people believe that pregnancy is not an illness, women may not adequately utilize antenatal services or follow a specified pattern of visit (likelihood of taking action) unless they perceive themselves as prone to developing some complications of pregnancy or childbirth (perceived susceptibility). They must understand that complications can lead to debilities such as anaemia, diabetes, hypertension, vesico vaginal fistula (VVF), or even death (perceived severity). Early registration at the antenatal clinic, regular visits, regular checks, monitoring of foetal and maternal progress by the health care worker, positive outcome of pregnancy, etc. will enhance the [illegible] (perceived benefits) without negative outcomes [illegible] difficulty (perceived barriers). Advice from significant others [illegible] [illegible] health care provider, friends, neighbours [illegible] [illegible] materials [illegible] [illegible]

[illegible]

It is also important to note that women may have a high perception about the benefits of ANC and are equally willing to take action but such factors as high cost of services, long trekking distances, no transportation, poor quality of ANC services, long waiting time, etc. may hinder the likelihood of taking action.

Fig. 2.2. The Health Belief Model and Factors Associated with Late Reporting for Antenatal Care



CHAPTER THREE

METHODOLOGY

This chapter begins with the design, scope of the study, and description of the study area, study population and study variables. It also describes the methods and instruments of data collection and data analysis, the validity and reliability of research instruments and ethical considerations.

Study design

A cross-sectional descriptive study design was used to document factors associated with late reporting for antenatal care among women of child-bearing age in Udi LGA of Enugu State, Nigeria.

Description of the study area

Enugu State is an inland state in the southeastern part of Nigeria. It was carved out of the old Anambra State on 27th August, 1997. With its capital at Enugu, it lies between longitude 6°30' North and latitude 7°30' East, and covers a land area of approximately 8,727.1 square kilometres. The state shares borders with Abia and Imo States to the South, Ebonyi State to the East, Benue State to the Northeast, Kogi State to the northwest and Anambra State to the West. Its population of about 5.6 million people is spread across the seventeen LGAs. The people belong largely to the Igbo ethnic group, which is one of the three largest ethnic groups in Nigeria.

The study was conducted in Udi LGA, one of the oldest and largest local council areas in Enugu state. It is a rural LGA with its headquarters at Udi, a town from which it derived its name. Although all its towns and villages are closely linked by network of roads, most are not tarred and have very difficult terrains. According to the recent population census, there are about 264,002 people living in Udi LGA (NPC, 2006). Agricultural and commercial activities are the main stay of the people's economy with palm wine tapping and animal rearing being the most popular. Nevertheless, a good number of them are involved in civil service and other government parastatals. The political class is actively involved in both state and national political activities.

Udi LGA is home for one of the busiest industrial layouts in the state, the 9th Mile corner, where up to four bottling companies including the Nigeria Breweries Limited (NBL) that is the Ama Greenfield, the Nigerian Bottling Company (NBC), the 7-Up Bottling Company and more recently, the Aqua Rapha industries, have their plants. Most of the commercial activities take place here, and because of its strategic location it is a stop-joint for most commuters to and from the northern parts of the country.

Health services in Udi LGA, like other parts of Enugu state are delivered by both private and public sectors facilities. The private sector includes for-profit and non-profit facilities and few number of faith-based health facilities. Public sector services are provided mainly through the District Health System (DHS) framework (Enugu State Ministry of Health (SMOH), 2008) similar to those obtaines in other parts of the state. Under the framework, the public health service has five tiers comprising health posts at the base, health clinics, health centres, cottage hospitals, and district hospitals at the apex. Health posts, health clinics, and health centres deliver primary health care services. Cottage hospitals provide limited secondary care services, and the district hospital provides secondary care and functions as a referral centre.

Udi LGA and its neighbouring counterpart Ezeagu make up one DHS - the Udi/Ezeagu DHS. This is further divided into Udi and Ezeagu Local Health Authorities (LHAs). In Udi LHA there are about twenty-eight health facilities – one district hospital, 15 health centres, health clinics and health posts, and 12 private health facilities. Traditional birth attendants and patent medicine vendors are also in full operation in the communities.

Population of Study

The population for this study comprised aggregate of women of child-bearing age (15-49 years) in Udi LGA. Those of them currently resident in the area during the period of study formed the target population and it was to this number that references were made. According to the National Population Commission (2006) Udi LGA has a total female population of about 118,423. Since by proportion, forty-five percent of all females is said to be within the reproductive age group in Nigeria, it follows therefore that the population for this study was taken as 53,291 women.

Inclusion Criteria

Those who took part in the study were those women who were within their reproductive years who registered for ANC during their periods of pregnancy and delivered of a life baby in the two years preceding the survey. Each must have been a regular resident of the area for the same length of time and must have given her consent to be a part of the study.

Exclusion Criteria: Those women who had not spent up to two years in the study area and those whose babies died at birth or within the two years duration were excluded.

Sample Size determination

The Sample size was determined electronically using the EPI INFO, Stat Calc programme for population survey or descriptive study using the simple random sampling (Dean, Dean, Coulombier, Brendel, Smith, Burton, Dicker, Sullivan, Fagan, and Amer, 1995). The target population earlier derived from the total female population of the LGA was used for the estimation of the minimum sample size. This method was used in a similar study conducted in southwest Nigeria by Bawa et al (2004). The formula was applied as follows:

Total female population	118,123
Women of child-bearing age (calculated)	53,291
Desired precision	5%
Expected prevalence	58.8%
Desired effect	1.0
Confidence level	95%
Sampling size	370

This number was rounded to 450 in order to give room for attrition, non-responses and high validity.

Sampling technique

A two-stage random sampling technique was used to draw respondents as follows:

Stage I: simple random sampling technique with paper balloting was first used to select three out of twelve towns in Udi LGA. Ngwo, Udi and Umuabi were selected.

Stage 2: stratified random sampling with proportionate allocation was used to select respondents from each of the selected towns.

The 1996 projected female population for the selected towns was used as a guide to proportionately draw respondents from each of the communities. This estimate was used because the breakdown of the 2006 house and population census figures for Nigeria is yet to be released for public use by the federal government as at the time of this study. The distribution of participants by locality is shown on the table below.

Table 3.1: Distribution of respondents by locality

Town	Number of females*	Population of women of child-bearing age	Number of respondents selected
Ngwo	14,646	6,591	308
Umuabi	3,441	1,548	75
Udi	2,527	1137	57
Total	**20,614**	**9,276**	**450**

*Projected female population for 1996 (NPC, 2006)

In each community, every household in which a woman delivered a live baby in the last two years was entered until the number of respondents for the community was completed. Where there was more than one eligible participant in one household, recruitment was done by balloting.

Instruments for data collection

Qualitative and quantitative methods were used for data collection.

Qualitative method

Focus group discussions (FGDs) and key informant interviews (KIIs) were used to collect data for the qualitative aspect of the study. They were used as diagnostic tools to initially explore the topic. The data so generated were subsequently used to design the instrument that was used for the survey. The FGD guide comprised eight items which focused on mother's knowledge and opinion about antenatal services in their communities, their attitude toward the use of the services and their current antenatal care practices. It also elicited responses on women' perceived benefits of care during

prepnancy, reasons for early/late reporting for care during pregnancy and perceived consequences of these on outcomes of pregnancy. The table below shows the summary of the FGDs conducted in each study site.

Table 3.2: Summary of FGDs conducted

Community	(15 – 25) years	(26 – 49) years	Total
Ngwo	1	1	2
Udi	1	1	2
Umuabi	1	1	2
Total	3	3	6

The KII guide was designed to collect data from different categories of healthcare providers who work at various levels of care in the communities- medical practitioners, nurses, midwives, community health extension workers (CHEW's), and traditional birth attendants (TBAs). With a total of 10 items, the guide was designed to generate responses regarding the antenatal care practices of women in different communities, factors associated with time of their reporting to health facilities and the implications of these to obstetric/maternity care. Data that were gathered through this method were also used to develop the questionnaire.

Quantitative method

An interviewer-administered, semi-structured questionnaire was used for the survey. Data generated with the FGD and the KII were used to improve its design. There were a total of thirty-five questions which were grouped under seven sections to cover the demographic variables of the respondents and the specific objectives of the study. The first section generated information on the demographic variables of the respondents; the second section gathered information about the antenatal care practices of respondents in the last pregnancy; the third section explored on their knowledge and opinion about the antenatal services in their communities while the fourth section accessed information regarding the attitude of women to use of antenatal services, the fifth section ascertained information about factors that hindered early reporting for care. The sixth and seventh sections sought the respondents' perceived consequences of late reporting for care and the suggested ways of improving on time of booking respectively.

Instrument validity

Several steps were taken to ensure high validity and reliability of all the instruments used for data collection. First, each of them was individually subjected to face validation by colleagues. The supervisor critically examined them and made necessary corrections. They were later subjected to expert opinions by specialists in obstetric care projects. Next, the instruments were translated from English language to Igbo language- the local language of the respondents (see Appendices 2, 4 and 6). Each one of them was finally pre tested among groups with similar characteristics of interest in a different, but nearby location. Akama-Ogbe, a town in Ezeagu LGA that shares a common boundary with the study site, was chosen and used for the purpose.

Instrument reliability

Prior the pre testing exercise, recruitment and training of research assistants were carried out to ensure clarity, understanding and consistency in interpretation of the variable items. The training focused on the objectives and importance of the study, sampling process, how to secure respondents informed consent, basic interviewing skills and how to review questionnaires to ensure completeness. The research assistants were involved in the pre-testing of the questionnaires in order to create opportunity for them to acquire practical interviewing skills.

The internal consistency of the questionnaire was further tested with Cronbach's alpha coefficient analysis. This is a model of internal consistency, based on the average inter-item correlation. When results show correlation coefficient greater than 0.05 they are said to be reliable. A correlation coefficient result of 0.67 was obtained. A high degree of reliability against a scale of 0.05 to 1 was therefore confirmed.

Pre testing of instruments

Focus group discussion: The research team (made up of a moderator, a recorder/note taker and an observer), led by the researcher paid an advocacy visit to the community leader of Akama-Ogbe to intimate him with the intention of the researcher and to obtain permission to enter into his community. Two women leaders were assigned to assist the team. They acted as both community guides and contact persons between the team and the women groups in the community. Through their assistance a meeting was

convened and held with the executives of the various women groups. The purpose of the study and the nature of the FGD formed the topics of the discussion. A convenient date, time and venue for the interaction were agreed upon.

Two FGDs were conducted, one for each of the groups of respondents. The first group was made up of six discussants in the age bracket of 15-24 years. Interaction with this batch lasted for about 35 minutes. The second group of 8 discussants aged between 25-49 years interacted for about 40 minutes. The vernacular version (see appendix IV) of the guide was used for the two groups and the investigator moderated both sessions. Their demographic data were collected at the end of each session.

Key informant interview: Four healthcare providers working in four different health facilities in the community were visited and interviewed. They included one medical officer in a mission hospital, one senior CHEW in a public health centre, two junior CHEWs in their private delivery homes. These homes are popularly known as 'maternities' in the area. The criteria for selecting these facilities were based on the length of service in the area and they were the most frequently patronised facilities in the community as mentioned by discussants during the FGD. While the two 'maternities' had been in existence for 14 and 24 years, the public facility and mission hospital have been running for 2 and 7 years respectively. All the interviewees reacted to all ten questions with ease and did not complain about the duration of time.

Questionnaire: Data generated with the reviewed versions of the FGD and KII guides were used to design the questionnaire used for the survey. Since it was to be interviewer- administered, five research assistants were recruited and trained, to acquaint them with the instrument for ease and uniformity in item decoding and administration to the respondents. A total of forty-five questionnaires (that is, 10% of the sample) were administered and collected over a two-day period. There was a 100% return rate. A post field meeting was held by the team and the researcher in order to share experiences and ideas that helped in the final designing of the instrument. The following were the observations and comments made at the end of the pre testing exercise:

i. Almost all respondents were willing to take part in the study. None of them saw any of the questions as intruding, manipulating or difficult to answer.

ii. Because respondents were interviewed in their homes or stalls, the problem of interrupting their work schedule was brought to the barest minimum.

iii. Response items that tested on knowledge and attitude in sections 2 and 3 respectively largely influenced those that test on practice in section 4. A rearrangement of the items that brought the questions forward was done.

iv. In section 3, eleven out of seventeen item statements that tested on attitude were all on general use of ANC. Since the key variables of the study bordered on attitude to early and late reporting, six statements were considered too few to test on them. Thus relevant item statements that spread across general, early and late reporting for care during pregnancy were added in the following order: general statements on ANC (5 statements), early reporting (6 statements), late reporting (6 statements). Negative and positive item statements were distributed evenly.

v. Questions 19 and 30 were similar. Since there was no question item that elicited response on time considered to be late reporting, item 30 was changed to become: what time may a pregnant woman be said to have booked late? In question 33, items 2 and 12 were similar thus item was deleted.

vi. Questions 18 and 21 were reframed to read: do the majority of pregnant women in this community keep their appointments regularly? And are pregnant women supposed to keep their appointments regularly? 1) Yes 2) no 3) I don't know.

vii. Screening respondents before administering the questionnaire was very important to avoid wasting time and material. The date of last confinement was inquired at the beginning before recruiting the respondent.

viii. The average time taken to complete each questionnaire was 23.7 ± 6.1 minutes.

Data collection procedure

The process of data collection began with an advocacy visit to the LGA chairman, the leaders of each selected community, and the heads of the health institutions that were interviewed. The data collection exercise was conducted in three phases. First, all six FGDs were conducted among the respondents, the KIIs were administered on the

healthcare providers and finally the questionnaires were administered again on the respondents.

In each selected community, two different groups of women interacted among themselves with the investigator moderating all the sessions, a trained note taker taking all proceedings and the observer noting other unprecedented happenings. All interactive sessions were recorded on tapes and were later transcribed by the note taker and the investigator. The criteria used for selecting key informants were health facilities most frequently patronised in the community as mentioned by the discussants during the interactive phase, and the health care provider must have worked in the community for at least a period of twelve months. In Ngwo community, two medical practitioners and a registered midwife, all in private health facilities were interviewed. In Udi community, a registered nurse/midwife in a public health facility, a junior Chew, in a health centre and a local birth attendant in a mission health facility were interviewed. A medical practitioner in a private hospital, a registered nurse midwife also in a private facility and a junior CHEW in a public health centre were interviewed in Umuabi community. All informants were interviewed in their facilities. The average time taken for each interview was 15 minutes.

The validated, semi-structured questionnaires were administered with the help of fifteen research assistants made up of four males and eleven females, who were earlier trained for the purpose. Criteria for selecting assistants were strongly based on level of education, previous experience in data collection exercise, knowledge about the terrain of the communities, ability to understand, speak and interpret the questions and responses in the local dialects as well as translate and write responses back and forth English and Igbo languages. Virtually all the males had had previous experience in data collection. A total of 450 questionnaires were administered to eligible respondents over a six-day period. There was a hundred percent return rate. The average time taken to complete each questionnaire was 24.7±10.6 minutes with a minimum time of 60 minutes. Data collection exercise was completed over a period of 6 weeks.

Data management and analysis

The data collected with the IDI and the KII guides were transcribed from the tapes and important themes generated were analyzed using the thematic approach. Data from

the questionnaires were sorted and edited on daily bases to ensure completeness. A coding guide was developed to facilitate data entry. Another coding guide was also developed for open-ended responses at the end of data collection. Each questionnaire was coded and entered into a computer through the Statistical Package for Social Sciences (SPSS) version 16 software and analyzed. The data collected were subjected to descriptive (means and standard deviations) and inferential (Chi-square) statistics. Finally, information obtained were summarized and presented in tables for better understanding.

Knowledge of respondents about antenatal services in the community was assessed by asking them to mention different facilities where ANC could be obtained by pregnant women, their perceived contents of the package, and the benefits of such care to the community. Knowledge about existing facilities, contents and benefits were each rated on a 4, 9 and 12 points scale respectively. Their total knowledge was later measured on a 25 point scale and the mean knowledge score statistically determined.

Ethical considerations

Approval to conduct the study was sought with a letter of introduction from the Faculty of Public Health to the local government chairman, supervisory councillor for health, heads of each of the healthcare facility and the local heads of each of the communities. The heads of each household were also approached for similar approval. Details of the purpose and objectives of the study were clearly explained to the respondents in their local language and translated versions of the appropriate instruments were used to collect data. Informed verbal consent was obtained after ascertaining that the individual respondents fully understand the implications of being a part of the study. They also understand that they had the choice to withdraw at any stage of the exercise. They were fully assured of strict confidentiality of all the responses they gave. This was also stressed during the training of the research assistants. None of the questionnaires could be traced to any respondent as only code numbers were used to identify them. Every form of identifier was eliminated including name, address and house number. At the end of the exercise all data collected were neatly packed in a safe.

Limitations of the study

This study had three limitations. First, the researcher had to rely on the respondents' self-reported accounts of ANC attendance pattern and their opinions about the ANC facilities in their various communities. Imprecise estimates of gestational ages at booking and number of ANC visits could occur due to potential recall bias. These reports could not be verified. There was no way of ascertaining if the respondents' claims were true or false. Secondly, the respondents' power of recall of events which took place during the pregnancy period could be affected by length of time between the last confinement and the time of interview. Individuals do not have the same rate of recall. However, people tend to remember joyful and interesting events such as child-birth more than the sorrowful ones hence only those who had delivered of life babies were recruited for the study. Thirdly, variables like beliefs, feelings and perceptions are cognitive processes that may not be accurately measured with the data collecting instruments used for this study. These variables have other competing interests. Applying, as much as possible, the local language of the participants and explaining to them the benefits of the research helped minimize confounders. Lastly, some respondents seemed to be biased in their opinions about the ANC facilities in their communities. Some felt that the interview exercise was an opportunity for them to rate the ANC services in their respective communities while some gave their opinions with respect to the facilities they used in the last pregnancy period. This resulted in the high values obtained in the analysis of opinion of respondents regarding the facilities in their communities. It took quite some time to convince some respondents that the exercise was only for academic purpose. Despite the fact that the researcher applied a high level of randomization in the sampling procedures, three communities in an LGA were not representation of Enugu state.

CHAPTER FOUR

RESULTS

The results of the study are presented in this chapter. Distribution tables and graphs are used to present results of the survey. Where necessary, the results from the qualitative methods (FGDs and KIIs) are presented in narratives to lend support to the results of the survey. Relevant statistical tests are used to test the hypotheses of the study on knowledge, attitude and practice of antenatal care among the study population.

Demographic Characteristics of the respondents

The demographic characteristics of respondents presented on Table 4.1 below show that respondents were between ages 15 to 49 years with a mean age of 27.7±5.1 years. More than three-quarters (76.0%) were in age group 25-49 years. Virtually all the subjects (96.4%) were married. 98.7% were Christians and 97.1% of Igbo ethnicity. Among the married respondents, 60.9% had husbands who were self employed, 35.6% in civil/public service and 0.9% in religious work serving as clergies. Respondents had between 1 and 8 children with an average of 3 children. Almost all the respondents had formal education. Sixty-nine percent had secondary, 20.7% had tertiary and 15.2% had primary education. Only 0.8% did not have any formal education.

Table 4.1. Demographic characteristics of respondents

N = 450

	No	Percent (%)
Age Group (in years)*		
25-49	342	76.0
15-24	108	24.0
Marital status		
Married	434	96.4
Single	9	2.0
Widowed	4	0.9
Divorced	3	0.7
Ethnic Group		
Igbo	437	97.1
Hausa	3	0.7
Yoruba	6	1.3
Others**	4	0.9
Religion		
Christianity	444	98.7
Islam	6	1.3
Educational level		
No formal education	4	0.9
Primary	69	15.3
Secondary	284	63.1
Tertiary	93	20.7
Occupation		
Employed	367	67.1
Unemployed	112	24.9
Students	33	7.3
Clergy	3	0.7
Husbands' occupation		
Self employed	274	60.9
Civil/public servants	160	35.6
Clergy	4	0.9
Not applicable	12	2.6
Number of children***		
1	127	28.2
2	116	25.8
>2	207	46.0

**Other ethnic groups include Ido, Ifik, etc

*Mean age = 27.7±5.1 years

***Average number of children = 2.6±1.5

Knowledge and opinion about ANC services in the community

Results of this objective are presented in tables 4.2 to 4.4.

Knowledge about ANC services

Almost all the respondents (98.9%) were aware of the meaning of ANC and where the services could be obtained. Each of them could mention at least one such facility in their areas (summary on table 4.4). Government health institutions were popular among 44.3% of the respondents while TBAs' homes were common to almost one-fifth (19.9%) of the respondents. Nurses and doctors were the most perceived direct care providers in private facilities (37.5%) and nurses by apprentice (11.2%) were the perceived popular care givers in TBA homes (see details on table 4.3).

A large proportion of respondents appeared conversant with the contents of ANC packages in their communities as nearly all of them could list an average of 7 contents (see table 4.4). The following were the list of contents mentioned by respondents in order of frequency: health information popularly called health talks (13.2%) often begins each clinic session, advice and counselling services (11.6%), pre and postnatal exercises often part of the demonstration activities (10.8%), weight taking (10.6%) and blood pressure checks (9.0%). Other services that were mentioned included: urine testing (8.7%), iron drug supplements (heamatenics) (8.6%), various blood tests (7.4%), foetal growth monitoring often assessed in form of abdominal palpation (7.1%), tetanus toxoid immunization (5.1%) and treatment of complications (5.0%). Intermittent preventive treatment (IPT) against malaria as part of ANC packages was mentioned by merely a proportion of 2.8% of the respondents.

Table 4.2. Perceived knowledge of respondents about ANC facilities and facility personnel in the community

	*No.	Percent (%)
Type of facility		
Private	384	44.3
Public	303	34.9
TBAs	173	19.9
Prayer houses	8	0.9
Total	**868**	**100.0**
Personnel in:		
Government facilities		
Nurses and doctors	249	28.7
Nurses only	54	6.1
Private facilities		
Nurses and doctors	326	37.5
Nurses only	58	6.7
TBAs		
Nurses by apprentice	97	11.2
Nurses only	47	5.4
Untrained person	25	2.9
Nurses and doctors	4	0.5
Prayer houses		
Nurses by apprentice	9	1.0
Total	**869**	**100.0**

*multiple responses

Knowledge about the benefits of antenatal services to the community

It was observed that the benefits of ANC to pregnant women in the community were not so popular among the study population. Respondents could list an average of 4 out of 9 benefits (see table 4.3). Twenty percent thought that abdominal palpation often performed by the midwife helps to determine the position of the foetus in the uterus,

13.6% stated that the health conditions of both the mother and the unborn child are continuously monitored throughout the period of pregnancy, 11.1% said that treatment complications could be treated etc.

Respondents were also assessed on the time they considered early or late initiation of care in pregnancy. Majority (74.7%) thought that booking within the first trimester was early practice. 23.1% thought it was 4-8 months, and 0.2% considered that 7- 9 months was late while 2.0% did not know. Concerning late booking, only 2.0% of respondents stated that initiating ANC even after two months was already late. 27.8% thought the second trimester was late, while the greatest percentage of them (68.0%) thought the last trimester was late. However, 2.2% claimed they did not know which time was considered late reporting.

Table 4.3. Perceived knowledge of respondents about benefits of ANC facilities to pregnant women in the community

Benefits	*No.	Percent (%)
Helps to know position of baby	408	20.2
Monitoring and assessing of mother and baby's condition	275	13.6
Treatment of complications	224	11.1
Offers opportunity for adequate care	213	10.6
Gets health education	210	10.4
Delivery is planned before time	192	9.5
Detection of hidden complications	166	8.3
Immunization against some infections	166	8.3
Counselling and advice	162	8.0
Total	2016	100.0

*multiple responses

Table 4.4. Overall knowledge of respondents about antenatal services in the community

	N	Total score obtainable	Mean	S.D
Knowledge score about different ANC facilities in the community	450	4	1.9	0.8
Knowledge score about content of ANC programme in the community	450	9	6.7	2.2
Knowledge score about benefits of ANC in the community	450	12	4.5	1.7
Total knowledge of antenatal services by individual respondents	450	25	13.2	3.6

Data in table 4.4 were used to categorise respondents into three sub groups with those who scored 14-25 points as having good knowledge, those who scored 13 points as having average knowledge and those who scored less than 13 points as having poor knowledge. Outcome results showed that knowledge was good among 251 (55.8%), average among 45 (10.0%) and poor among 154 (34.2%) of respondents.

The knowledge grade of respondents were compared with age, number of children and respondents' level of education to observe the effects of their relationship. From table 4.5 below, age and level of education were found to be statistically significant to the knowledge of respondents about the ANC facilities in their communities. A greater proportion of respondents in age group 25-49 years (57.9%) had good knowledge compared to those in age group 15-24 years (df=2, p=0.03) regarding the level of education of respondents, most respondents with tertiary education had good knowledge about ANC in the communities than all others (df=4, p=0.01) however, no significant association was found between the parity of respondents and the knowledge (df=4, p=0.05)

Table 4. 5. Relationship between age, parity, and level of education of participants and knowledge about ANC in the community

	Knowledge category of respondent						
Age group	Good	Average	Poor	Total	X^2	P value	Df
15-24 years	52 (48.1%)	18 (16.7%)	38 (35.2%	108			
25-49 years	198(57.9%)	28 (8.2%)	116 (33.9%)	342	7.2	0.03	2
Number of pregnancies							
1	63 (49.6%)	18 (14.2%)	46 (36.2%)	127			
2	60 (51.7%)	8 (6.9%)	48 (41.4%)	116	9.2	0.06	4
>2	127 (61.4%)	20 (9.6%)	60 (29.0%)	207			
Level of education*							
Primary	38 (55.1%)	4 (5.8%)	27 (39.1%)	69			
Secondary	146 (51.4%)	36 (12.7%)	102 (35.9%)	284	13.5	0.01	4
Tertiary	66 (71.0%)	6 (6.5%)	21 (22.6%)	93			

*no formal education excluded Row percentages reported

Results from the FGD corroborate the above data from survey. Discussants in all three communities were aware of the meaning, benefits, contents and the implications of antenatal care to the wellbeing of pregnant women and their infants. According to them, antenatal care is all about women taking care of a pregnant woman and the baby in her womb, monitoring their conditions, checking whether the baby is in good position and seeing that both are doing well. An older discussant in Ngwo community noted that such care is obtainable in an organized setting hence going for antenatal means a woman going to a university hospital to check her body and how her baby is positioned in her womb. It was further emphasized that such care must be obtained in only government approved places of care.

Availability of ANC facilities in their communities was captured in a statement by one contributor who said that *... there are a wide range of facilities- private hospitals and maternities' government hospitals, primary health care centres and local traditional delivery homes known as traditional birth attendants (TBAs)*. Although these facilities exist in varying degree within the towns, Ngwo community appears to have the highest number of private hospital/maternities, government health centres and few local delivers homes. Umuabi community has only a government health centre serving the entire community and its environs. Others are private health facilities. The only general (district) hospital in the LGA is located in Udi town.

A similar trend was observed with the results about the contents of ANC services. All the discussant knew about contents of antenatal programme. Health talks were mentioned most frequently. One discussant in a group described in this manner, *... we're taught different things like baby bathing, proper dressing during pregnancy, importance of all the routine infant and mothers' immunizations, their timing, types e.g. BCG, different doses for each of them.* Another woman narrated *first we pray, then we are advised on what to eat and how to carry ourselves throughout the period of pregnancy.* As part of the teaching, another discussant added, *we're taught the kind of work we're supposed to do, the position we should be taking when we want to lie down to sleep.*

Describing the general and obstetric assessments that are usually done as part of antenatal services, discussants stated *..... they examine our body very well, they check our BP (blood pressure) and take our weights.* Another woman added *that nurses or doctors would check how the baby is positioned in your womb (our people call it Igba afo (which means abdominal palpation) whether the baby is in a normal or abnormal position. They examine if the baby is alive or dead.* Mention was also made of the various laboratory investigations that are routinely or specifically carried out as well as management and treatments that may follow findings. One discussant in one of the older groups said *the woman's blood level would be monitored. If she is short of blood, she can be given some blood and maybe follow her up with good diet because her blood level must rise before the delivery.* Other laboratory tests mentioned were *urine tests and HIV screening.* In an attempt to describe the pelvic assessments usually carried out about the 36th week of pregnancy, an older discussant said *.....at a certain*

month ... the doctor will examine you to check if you can deliver the baby. if you can't, he will prepare you very well for an operation.

Qualitative data responses from all the discussion groups confirmed that women had inadequate knowledge about benefits of ANC. To them, *it is important for pregnant women to get antenatal care because by that the position of the child in the womb is known; the pregnant woman is assessed to know if she is healthy and fit for delivery; she is also told the kind of food she is suppose to eat so that her body and that of the baby in her womb will be well nourished.* A young mother in Udi emphasized that now *that different diseases are spreading, such as HIV/AIDS, it is important that every pregnant woman should go for laboratory tests to screen for such diseases. If she is detected to be positive, they will start in time to prevent her transmitting it to the baby in her womb.* And *some women who suffer one illness or the other when they are pregnant remain under observation to prevent death of their babies.*

A discussant among an older group in one of the communities emphasized that the benefits of obtaining care in pregnancy increased when women utilised multiple facilities simultaneously in the same pregnancy. According to her *attending antenatal in both the nurses' home and the doctors' clinic is good. Some women have narrow pelvis. At antenatal month the nurse will ask him to see a doctor. The doctor will check if you can deliver the baby normally. If you can't he will prepare you very well for operation. When the time is due, he can then open up and bring out your baby ... both of you will be in good conditions.*

In order of frequency, the under listed are the benefits as mentioned by the discussants:

- *It helps to know the state and position of the baby in the womb*
- *The mother and baby's condition of health is routinely assessed and monitored*
- *The mother gets adequate education on health e.g. on diet, dressing etc*
- *Counseling and advice on what to do and what not to do*
- *Any hidden illness or abnormality is detected e.g. narrow pelvis*
- *Some preventive treatments are given e.g. immunization against tetanus*
- *Helps women to plan for delivery*
- *Sick mothers are often kept under close observation*

Similar results were generated from the key informants' interview. All the health care personnel interviewed stated that a wide variety of services were offered to pregnant women in their facilities. The services included health information, general/obstetric examinations, advice and counseling, routine/specific laboratory investigations, prevention and /or treatment of specific disease conditions, and referral of cases. Enumerating the packages of ANC programme in his facility, a medical practitioner said, "*We give them (the pregnant women) talks, palpate them, check their blood pressure, check their urine, haemoglobin, we screen them for HIV and if somebody is HIV positive we refer her to a higher centre where she'll be looked after, we also give them immunization*". One female provider elaborated extensively saying, "*I check whether her blood is sufficient or not ... I put her on scale that will tell me if the baby is increasing or decreasing, check her blood pressure to know whether her baby is normal. Then if she booked early, I will be watching her, taking her total observation to know how she feels, whether she is feeling healthy or she has malnutrition. When I search for all these things and immediately see she has some problem, I will keep on treating her and telling her what do and what not to do so that she'll have a healthy baby on the day she'll deliver*".

In Udi community while the more qualified personnel explained "*... we give health talks, conduct general examination, test urine, check blood pressure, test blood for HIV, VDRL to check for syphilis, genotype as well as blood group and rhesus factor, we also palpate their abdomen to determine the lie and position of the baby*", the less qualified personnel said, "*... when they come, we welcome them very well, make them feel at home and comfortable, then we examine them very well and take proper care of them and record all findings. We pray and sing with them, give them health talks on proper dressing, diet in pregnancy, rest and sleep, breast care, personal hygiene, type of shoes to wear (they are to wear flat shoes) to avoid falls, we do palpation, weighing and blood pressure checks ... then tests like urine tests, Hb (haemoglobin) and HIV tests, if we detect anything further tests can be done*". Contents of antenatal services seemed the same in Umuahi community as contained in a statement by one respondent, "*When they come, we have good interactions with them, ... give them antenatal talks that is health talks, they tell us their problems, ask us questions and get answers for them, we carry out investigations like urine tests (for sugar and protein), we do blood*

tests, take their weights, check blood pressure, palpate their abdomen to check the conditions of their babies"

All the key informants believed that antenatal care is of great benefit to the well being of the pregnant women and their babies. The most popular benefit mentioned by the informants was the screening benefit of antenatal care summarized in a statement by one interviewee in this way. *"Antenatal care is very, very important. It is during antenatal that most things that happen to women during pregnancy are detected. You can detect especially, a women with bad obstetric history, in this era of HIV you can still detect it early enough and advise them on what to do, some women that are poorly fed are detected, some that are dirty are also detected"*. Referring to the health information benefit of antenatal care, a few informants said that *the pregnant women learn a lot during antenatal*. Elaborating further, a medical practitioner described a typical antenatal day in his clinic this way: *Once in a month we organize a general antenatal clinic during which we teach them- we educate them on what they should know about pregnancy, about labour, about health generally. They gather in a large number and we instruct them as best as we can.*

It was also noted that a pregnant woman who attends antenatal care stands the chance of receiving adequate care and treatment by virtue of continuous monitoring of progress to which she is often subjected. According to a provider, *antenatal care is important because it is designed to take care of the woman's health physically and mentally, to anticipate problems difficulties that may arise in labour, to ensure the pregnancy is carried to term, and to ensure the birth of a living and health baby.* With regard to prompt management and referral, a junior health worker points out that, *pregnant women are continuously monitored to detect some danger signs like protein and sugar in urine ... the doctor will then be invited to take over the management of the case.*

Opinion about the antenatal services they used in the last pregnancy

The opinions of respondents regarding the antenatal services they used were obtained. It was observed that opinions of respondents were favourable to most items rated. Ninety-eight percent of them affirmed that ANC facilities were available, they

provided quality services (90.2%), and number of facilities were sufficient for those who sought care (88.0%). On the contrary, nearly one-quarter of respondents (24.9%) thought that ANC services were not affordable by majority of women in their communities, and 21.6% thought that the facilities were not close to the majority of the people. However, 0.9% of respondents reported they did not know if facilities for ANC were available in the community or not. Full responses are shown in table 4.6.

Table 4.6. Opinions of respondents about antenatal services they used in the last pregnancy

N = 450

Statement	Yes	No	I don't know
	No. (%)	No. (%)	No. (%)
a. Are the places available?	442 (98.2)	4 (0.9)	4 (0.9)
b. In your opinion, do you think they all provide quality services?	406 (90.0)	21 (4.7)	23 (5.1)
c. Are they sufficient for pregnant women?	396 (88.0)	39 (8.7)	15 (3.3)
d. Are their staff all friendly to women?	395 (87.8)	40 (8.9)	15 (3.3)
e. Do you think their staff is qualified?	375 (83.5)	24 (5.3)	51 (11.3)
f. Is there enough staff there?	374 (83.1)	60 (13.3)	16 (3.6)
g. Are there enough equipment and or drugs?	363 (80.0)	60 (13.3)	27 (6.0)
h. Do you think their services are affordable by the majority of pregnant women?	302 (67.1)	112 (24.9)	36 (8.0)
i. Are those places close to the majority of those who seek their services?	299 (66.4)	97 (21.6)	54 (12.0)

Results of the FGD were also consistent with that of the quantitative data above. Discussants varied in their opinions about the antenatal services in their towns. Availability and proximity of health care facilities in Ngwo community were captured in the following statement: *... the health facilities are available and they are located around our home, those that live far may spend just about N20 on transportation.* Discussants in Umuahi noted that *the different places they pregnant women go for antenatal is the maternity, some use the hospitals while some use the traditional birth homes.* In another group a discussant explained, *we get it from the maternity which is centrally located in our town. ... people from Obinagu and Umuagu our neighbouring towns also patronize here, some do go to Udi general hospital while some others go to a private hospital at Ndeagu.* In Udi town one contributor disclosed that some qualified health care personnel operated some private clinics around the area. Pregnant women have a good number of places to choose from. *There are some qualified staff nurses who have antenatal homes around, there is also a general hospital including other private hospitals. Women also visited health centres and rural women outside, inside the villages.*

Attitude to use of antenatal services in the community

The attitudes of women to ANC use were assessed by requesting them to respond to a set of outlined statements on common beliefs about ANC and early or late reporting in particular. Respondents were requested to 'agree', 'disagree' with or remain 'undecided' to each of the item statements. Agreeing with a positive statement or with a negative statement was scored one point each, while disagreeing with a positive statement or agreeing with a negative statement were scored zero. All undecided responses were scored zero. The total attitude score was weighed on a 0 to 17 point scale with 17 points being the maximum obtainable score. Using the 50th percentile, respondents were divided into two main categories. Those whose attitude score were above the mean value were classified as having positive attitude to ANC use while those whose score were below it were classified as having negative attitude.

Attitudes of respondents were found to be statistically positive. This is reflected by a high mean attitude score of 13.9 ± 2.1. Attitude was found to be positive in 65.1% of respondents. A breakdown of the individual scores of the subjects in all the test items

is displayed in table 4.7. Ninety nine percent of respondents agreed that every pregnant woman should receive this care for all of her pregnancies. 99.1% agreed that most of the services rendered to pregnant women at ANC were of great benefit to both the mothers and their babies. Ninety four percent agreed that the best time to register was within the first three months of pregnancy. Over two-thirds of them were opposed to late booking as majority (84.7%) agreed that it was a risk for a pregnant woman to wait for long before registering for ANC. It was therefore the belief of a large proportion (90.7%) of them that early registration for ANC should be made compulsory. On the other hand, 44.9% of the respondents disagreed that early registration was not cost effective and that whether a pregnant woman registers early or not what will happen will happen.

Table 4.7. Attitude of respondents to early reporting for antenatal care

N = 450

Item statement	Agree No. (%)	Disagree No. (%)	Undecided No. (%)
A. Most services rendered to mothers during antenatal care are of great benefit.	446 (99.1)	2 (0.4)	2 (0.4)
B. Every pregnant woman should obtain antenatal for all her pregnancies	447 (99.3)	0 (0.0)	3 (0.7)
C. Every pregnant mother should take ANC seriously.	449 (99.8)	0 (0.0)	1 (0.2)
D. Those who feel healthy may register when it is convenient for them.	154 (34.2)	295 (65.6)	1 (0.2)
E. Pregnant women should decide when and where she may register for ANC	390 (86.7)	57 (12.7)	3 (0.7)
F. It does not matter when a pregnant mother registers for antenatal care.	99 (22.0)	341 (75.8)	10(2.2)
G. A pregnant woman should register early for antenatal care only in her first pregnancy.	108 (24.0)	331 (73.6)	11 (2.4)
H. Early registration for ANC is not cost-effective.	229 (50.9)	202 (44.9)	19 (4.2)
I. It is a risk for a pregnant woman to wait for so long before she registers for antenatal care	381 (84.7)	62 (13.8)	7 (1.6)
J. Those who register late may not obtain most of the benefits of antenatal care	398 (86.7)	52 (11.6)	8 (1.8)
K. Only those who can afford it may register early for antenatal care	119 (26.4)	323 (71.8)	8 (1.8)
L. Late registration for ANC can cause delay in getting help in time of emergency	402 (89.3)	37 (8.2)	11(2.4)
M. I will advice my friend/neighbor to register early if she becomes pregnant	439 (97.6)	5 (1.1)	6 (1.3)
N. I will register after six months if I am not sick.	121 (26.9)	316 (70.2)	13 (2.9)
O. Early registration should be made compulsory for every pregnant woman	408 (90.7)	38 (8.4)	4(0.9)
P. Whether a pregnant mother registers early or not what will happen will happen.	179 (39.8)	253 (56.7)	18 (4.0)
Q. It is best to register within the first 3 months of pregnancy.	425 (94.4)	18 (4.0)	7 (1.6)

The effects of age, level of education and number of children was observed on the attitude of the respondents ANC use. The results showed that there was no significant relationship between attitude and any of the variables. Table 4.8 shows the details.

Table 4.8. Comparison between age, level of education and parity of respondents and attitude to ANC use

	Attitude of respondents					
	Positive	**Negative**	**Total**	**X^2**	**P value**	**Df**
Age group	**No. (%)**	**No. (%)**	**No.**			
15-24 years	63 (58.3)	45 (41.7)	108			
25-49 years	230 (67.3)	112 (32.7)	342	2.8	0.09	1
Level of education						
Primary	42 (60.9%)	27 (39.1%)	69			
Secondary	181 (63.7%)	103(36.3%)	284	4.2	0.13	2
Tertiary	69 (74.2%)	24 (25.8%)	93			
Number of children						
1	82 (64.6%)	45 (35.4%)	127			
2	72 (62.1%)	44 (37.9%)	116	0.9	0.65	2
>2	139 (67.1%)	68 (32.9%)	207			

Row percentages reported *no formal education excluded

A positive attitude to use of antenatal services among women was confirmed by the FGD discussants in the two age groups in all the communities. A common belief among them was that ANC use should be a right of every pregnant woman irrespective of demographic or socioeconomic backgrounds including obstetric histories of the women. To them, it is a cost effective preventive measure and *… no amount of money we're asked to pay can equal the babies we'll have at the end.* They emphasized that

ANC should be taken seriously especially by those women who often develop sickness during pregnancy. In all age groups women were of the view that decision to initiate ANC as well as the choice of facilities should be a special reserve of the pregnant woman herself because *she is the one who bears the children and knows where her mind keeps*. However, a few believed that such decisions should be a joint responsibility of the both spouses.

The majority of discussants were also of the view that ANC worked best if commenced in the first trimester of pregnancy and its objectives are best achieved when mothers kept regular appointments. On the other hand some believed that early or late booking was acceptable so long as the woman *considers herself healthy* or *she can stay back at home. Better still, if one was lucky to have an older woman around her (like a mother or a mother-in-law)*, one could register anytime one wished because according to them, *they (the older women) are more experienced and know how to handle pregnancies*. Nevertheless, majority of discussants perceived that early registration was a common practice among the primigravidae (first timers) and those who feel they are not healthy.

Discussants had different opinions on the minimum number of visits before delivery. A few of them asserted that visits to ANC clinics should not be limited to any number of times rather it should be dependent on when one started receiving care. One discussant explained it this way: *a lot is spent ... so I reduce the number of my visits to when I'm sick*. A different opinion came from another older woman who said, *I register early, so mine is uncountable*. It was however, observed that in that community, pregnant women were given weekly appointments by private health workers. They observed that more visits attracted more expenses.

It was also a common belief among some mothers that the quality of care received during pregnancy depended on affordability. *These places that charge more offer better services and this is often the case in private hospitals*. However, it was observed that in Umuabi, women thought that services were cheaper and of better quality at the lone health care in the area but healthcare providers are few and times not present in time of need. One woman concluded that *women who have strong trust in God may abandon themselves into the care of God and not take antenatal care as a reserve*

Antenatal care practices of women in the last confinement

Respondents were requested to answer questions regarding their use of antenatal services during their immediate past pregnancy. Data responses are presented in tables 4.9, 4.10 and 4.11. The mean time of reporting was 17.5± 6.9 weeks. A little above half of the respondents (53.1%) reported registering for the first time in the second trimester, (40.9%) in the first trimester and a small number (6.0%) in the third trimester. This translates to a total of 59.1% of respondents booking late for ANC. Of this 266 who reported late, those who booked during the second and third trimesters were 87.2% and 12.8% respectively. More than half the respondents (60.4%) reported using the private facilities while 30.4% used government facilities. Only 4.9% acknowledges using the traditional homes just as 4.2% reported using government and private facilities simultaneously. The reasons given by respondents for choosing to book when they did and for using the preferred facilities are displayed in table 4.10. The average number of visits to these facilities was 8.1 ± 4.6. The largest number of respondents (83.1%) visited the facilities more than four times before delivery while only 11.8% made between one and four visits. Five percent of the respondents could not remember the number of times they visited the facilities before delivery.

Table 4.9. Antenatal care practices of respondents in the last confinement: time of reporting, facility used and number of visits made

	N= 450	
	No.	Percent (%)
Time of reporting (in weeks)*		
5-13 (first trimester)	181	40.9
14-26 (second trimester)	239	53.1
>26 third trimester)	27	6.0
Facilities used		
Private	272	60.4
Government	137	30.4
TBA	22	5.0
Government and private	19	4.2
Number of visits made**		
1-4	53	11.8
5-10	284	63.1
>10	90	20.0
Can't remember	23	5.1

*Average time of reporting = 17.5±6.9 weeks (range: 5-30) **mean number of visits = 8.1±4.6 (range: 0-30) visits

Table 4.10. Respondents' reasons for choosing the time of reporting and the facilities

	*No.	Percent (%)
Reason for reporting at that time		
I just felt like/no reason	282	62.7
I was sick	135	30.0
It was my first pregnancy	47	10.7
**Others	5	1.1
Total	**469**	**100.0**
Reasons for choosing facility:		
They take good care of women	273	60.7
Their staff are qualified	132	29.3
Their services are cheap	63	14.0
My mind accepts it	20	4.4
Total	**488**	**100.0**

*multiple responses **for pregnancy to get advanced, distance to facility was too far

With regard to compliance with follow-up visits/appointments, the majority of respondents (82.9%) claimed that they kept all clinic appointments, while 17.1% did not. The reasons for non-compliance among the 77 respondents were "feeling of wellness" (37.7%) and possession of enough experiences from previous pregnancies (62.3%). It is also seen that 44.0% of respondents took the decision to initiate care on their own. Decision was taken by the husbands in 14.9% of cases (see table 4.11).

Analysis of the overall ANC practices of respondents was determined by rating respondents on a 0-2 point scale with zero representing poor practice, one representing fair and two representing good practice. Results showed that practice was good in only 37.1%, fair among 50.2% and poor among 12.7% of respondents.

Table 4.11. Antenatal care practices of respondents in the last confinement: compliance with appointments and decision to initiate care

	N = 450	
	No.	Percent (%)
Complied with all follow-up visits		
Yes	373	82.9
No	77	17.1
Decision to initiate care was by:		
Self	198	44.0
Partner and self	166	36.9
Husband	67	14.9
*Others	19	4.2

*Others include mothers, mother-in-laws, friends, etc

To determine if the major reasons given by respondents for booking at the reported time were related to their ages, each of the reasons was matched against their time of booking. It was observed that personal choices (that is, those who booked when it pleased them) and sickness at the early stage of pregnancy were major factors for booking early among those in the older age group. Although the former was strongly significant (df = 1, p = 0.002) the latter was not found to be significant (df = 1, p = .700) to the time of booking. However, being pregnant for the first time (inexperience) was a factor for reporting early among those in the younger age group (df = 1, p = 0.002). See details in tables 4.12 and 4.13.

Table 4.12. Comparison between time of reporting and reasons for respondents' reporting

Reasons	Time of reporting			X^2	P value
	Early	Late	Total		
No reason (I just felt like)	89 (31.6%)	193(68.4%)	282	27.196	0.001
Sickness	71 (52.2%)	65 (47.8%)	136	10.930	0.001
First pregnancy	33 (70.2%)	14 (29.8%)	47	20.176	0.001

NB Row percentage reported

Table 4.13. Comparison between age of respondents and reasons for booking at the time

Reasons	Age group respondents			df	P value
	15-25 yrs	25-49 yrs	Total		
	No. (%)	No. (%)	No.		
No reason (I just felt like)	54 (19.1%)	228 (80.9%)	282	1	0.002
Sickness	34 (25.2%)	101 (74.8%)	135	1	.700
First pregnancy	29 (61.7%)	18 (38.3%)	47	1	0.001

NB column percentage reported

Contributions made by most FGD discussants in all the groups regarding the ANC practices of pregnant women were in harmony with the findings of the survey results above. A common view among them was that ANC was well embraced by the majority of pregnant women at different levels of healthcare. According to the majority, choice was often determined by personal beliefs, values and costs. In Ngwo community, discussants claimed that the most frequently utilized health care facilities were private maternities/hospitals. In Udi and Umuahi communities local birth attendants were mostly patronised because, according to them, they were affordable and accessible. They were also of the opinion that women of all socioeconomic classes utilized care during pregnancy but those in the middle and high classes sought care at the private, general and teaching hospitals while those in the low socioeconomic class mostly patronised the local midwives. A common view among them also was that irrespective of socioeconomic class, the majority of pregnant women commenced ANC late in pregnancy. In their opinion, primigravidae are more likely to book earlier, at two and four months while multiparous and grandmultiparous women could book as late as seven and eight months. Some may even appear only in labour.

Results of the KIIs in the three settings, confirmed that majority of pregnant mothers obtained care at all levels of health care, booked late, paid few visits or no visit at all and irregularly kept appointments. Despite the perception of providers in Ngwo that the community members were enlightened and are health conscious, no significant difference was observed in the general ANC practices of women. All the informants also noted that a large proportion of pregnant women still patronised the traditional birth attendants. primigravidae sought care most because of fear of the unknown, and *majority came in the second trimester a few come in the first trimester while a few again come in the third trimester*

Reacting to pattern of compliance with subsequent visits, a few health workers said that many pregnant women usually kept appointments. According to a respondent, *some are quite regular, some just wait until they fell sick before they come, some don't hesitate at all, they just register and then go away. If they have problem during labour, then they come, otherwise they just take the hospital as a resort.*

The average number of visits per woman before delivery as was observed in one provider's antenatal record was five per pregnancy. However, in Udi community two,

pregnant women also patronised different cadres of health facility, reported late and also kept irregular appointments. One care giver said, "*He used to see them at the seventh or eighth months, some even come at the ninth month..... They say that they don't have money for their transport so they go to birth attendants who are closer to them*". Interviewees noted also that primigravidae usually came earlier around three months, and that frequency of visits was largely dependent on complication in previous pregnancy. Another provider pointed out that late booking notwithstanding, women made about three to four visits before delivery, probably because they were given more frequent appointments toward delivery time. In the words of a long time practicing midwife, *they do not keep appointments. It is just the day they feel like coming or the day they may have complaints such as fever we see them.*

In Umuabi, the picture was similar to that in Ngwo and Udi communities. All the care providers reported that pregnant women booked late, kept irregular appointments and made between one and twelve visits. According to a medical practitioner, *pregnant women book in late stage here, some don't even come until when they're about to deliver or when they have problem during delivery.* Again another provider said, *some make up to 10 or 15 visits, some don't even make up to two visits before delivery claiming they don't have any problem.* Although primigravidae are thought to book earlier, an informant pointed out that *... the first timers come around four and five months while those who have had second or third deliveries book around seven and eight months because they have had experience.*

Knowledge about consequences of late reporting

Respondents were asked to mention what they perceived as the consequences of registering late at the antenatal clinic. The data responses shown in table 4.14 indicates that the most frequently listed effect of late initiation of ANC* among the study group were maternal complications and death (24.9%), poor health outcome for the baby (17.2%), delay in getting help in time of emergency (17.2%), etc. Less than one percent of the study population knew that late booking could attract more monitory expenses for the individual.

Table 4.14. Respondents' perceived consequences of late reporting for antenatal care

Consequences	*No. N=1525	Percent (%)
May lead to maternal complications/death	380	24.9
Poor health outcomes for the baby e.g. jaundice	262	17.2
Delay in getting help in time of emergency	262	17.2
Inadequate planning for delivery	232	15.2
Missed opportunity for health education	223	14.2
Incomplete treatment/preventive measures e.g. IT and IPT	142	9.3
Increases neonatal death	17	1.1
Others (attracts more money)	7	0.5

*multiple responses Percentages based on new *N

Among the F(il) discussants in all age groups, myriads of consequences of late booking for care in pregnancy were enumerated. The major points that were raised were the woman may run into problem that may have been prevented if she had registered earlier, some preventive measures like tetanus toxoid may not be completed, the mother may miss the opportunity to learn many things about health or pregnancy, she may develop complications such as malaria that may affect the baby adversely leading to neonatal jaundice, and that she may take unfavourable decisions in time of emergency.

They were all in favour of early booking as shown by the comparative statement of a certain discussant who said, "One might be waiting till six months before reporting and may not know that the devil is planning evil for her. If she started as early as she noticed that she has taken in the nurses will be taking care of her, she and her baby will be benefiting. But if she reported late anything can happen to her- she or her baby may be ill inside. For example, some might deliver and have convulsions, or tetanus may attack their babies. Some might feel that they're healthy and will continue taking

local herbs until their blood dries up. But reporting early will enable you to be checked, you and your baby will be healthy.

Most of the informants also perceived that booking within the first trimester was best for the well being of the mother and her fetus. Among them also a long list of merits and demerits of early and late booking was obtained. The under listed are the merits of early reporting as was given in their order of frequency:

- Screening for and early detection and correction of complications
- Adequate time to care for the woman
- Prevention of diseases complications e.g. anaemia tetanus, HIV etc
- The woman obtains help early in time of trouble
- Early and better planning for delivery.
- Better opportunity to acquire health information learning.
- Pregnancy is confirmed early enough before abortion easier to condition
- Enough time to complete certain prevention schedules such as intermittent preventive treatment (IPT) for malaria and tetanus toxoid.
- The woman is more confident and is assured of safety.

Conversely all informants disapproved of the habit of booking late, which according to them have the following consequences:

- Detection and management of complications may be too late
- Delayed observation of serious complication e.g. anaemia which may lead to death
- Women may be poorly informed about positive health behaviour e.g. personal hygiene, diet in pregnancy, postpartum care
- Non-completion of preventive measure such as tetanus toxoid
- Poor immunity cover for the baby before delivery
- Tetanus toxoid schedule may be broken
- Late management of cases example pre-eclampsia
- Poor planned delivery method especially in emergency
- Access getting help is in time of emergency is difficult
- Blood management of cases in time of emergency
- They are referred in crisis to hospital improperly
- Intervention measures may not be extremely

Perceived factors associated with early and late reporting to antenatal care among women

This objective was assessed by requesting respondents to mention all they thought could be responsible for early and late reporting among pregnant women in their communities. From the result analysis, 30.8% of the respondents said that sickness in early stage of pregnancy, first pregnancy/experience. (17.0%) and complications in previous pregnancies (13.7%) were the major reasons why pregnant women would present early to ANC clinic. Other reasons that were given included: being enlightened or educated (10.9%), free eANC services (10.6%), when there was adequate fund (9.4%), having experienced a previous neonatal death (5.6%) and a fear of unknown such as complication (1.5%).

With regard to late initiation of ANC, the major reasons given by respondents why women would present late to the facilities are: a feeling of wellness (22.4%), lack of money/poverty (21.4%), ignorance about benefits of early reporting (10.0%), and etc. See table 4.15.

Table 4.15. Respondents' reported reasons why women book late for ANC

Reasons	*No. N = 1604	Percent (%)
Feeling of wellness	360	22.4
Lack of money	344	21.4
Ignorance	161	10.0
Laissez-faire attitude to ANC	157	9.8
Multiparity/several experiences	110	6.9
Unfriendly attitude of health workers	104	6.5
Dislike for hospitals drugs	102	6.4
Long trekking distances	102	6.4
Long waiting time in clinics	86	5.4
Other alternatives (PMVs, TBAs)	78	4.9

*multiple response Percentage based on the new N

Thematic analysis of the data from the FGDs showed that the findings corroborate the above results. Majority perceived that pregnant women reported late primarily because of the perception that a pregnant woman is not sick thus the saying *'there is nothing wrong with me'*, that is, they feel well. This according to the discussants was particularly a common belief among those who had had previously hitch-free pregnancies, labour and deliveries. The second was lack of money. To them many women delayed booking till late stage in pregnancy because *they do not have money and antenatal charges are often high especially in private-owned facilities*. A young mother in one of the groups pointed out that *advice from older women such as mothers or mothers-in-law could cause late reporting*. One other discussant among an older age group observed that *some women might not know they are pregnant until their stomach starts bulging out*. Other reasons included that baby had not fully formed at the first few months, and ignorance of benefits of early booking.

A good number of discussants also thought that women encounter a lot of problems while obtaining ANC. Some of these problems included *high cost of services, transportation, indifferent attitude of some nurses, dislike for antenatal drugs, and unfriendly attitude of health care providers especially in public health facilities including long waiting time spent in the facilities*. These problems however, force women to report late or seek care in alternative place such as local delivery homes.

On the contrary, feeling of unwell at the early stage of the pregnancy, inexperience and complications in previous pregnancies were the major reasons given by discussants why pregnant women would begin ANC early.

Results from the KIIs were confirmatory of the reasons why women reported late to health facilities for ANC services. An informant's statement captured it as follows: *some women have varied reasons, some don't have any reason just that they feel they are not sick, there is no need going to antenatal clinic, such complain that the distance is far, some may attribute it to cost some may just have laissez-faire attitude towards antenatal care*

Suggestions for improving on late reporting for antenatal care

Respondents were requested to suggest ways which they think could help to tackle the problem of late registration for care among pregnant women. Making antenatal services free for all pregnant women (31.0%), creating awareness through the electronic and print media (20.5%), reducing the current antenatal service charges for women (12.7%) among others, were their major suggested ways of improving the problem (see table 4.16).

Table 4.16. Suggestion for improving late reporting by respondents

Suggestions for improvement	*No.	N = 649 Percent (%)
Make ANC free at all levels of care	201	31.0
Create awareness through radios, T.Vs etc.	133	20.5
Reduce charges for ANC services	83	12.7
Giving women incentives at booking e.g. snacks	66	10.2
Through individual/public health education	51	7.9
Building more govt. health centres	32	4.8
Providers should be more friendly	25	3.9
Through advice and counseling	25	3.9
Improving quality of services	24	3.7
By making ANC compulsory	9	1.4

*multiple responses Percentage based on the new *N

Discussants appeared exhaustive with suggestions about ways to help improve on ANC uptake by women particular in respect to late presentation. Top on the list is tackling the unfriendly behaviors of healthcare providers especially in government health facilities. In the words of a contributor, "organizational committee that will monitor the nurses especially in government institutions should be set up to control

them and ensure they go about their duties the right way – with patience. Regarding cost of services, a discussant said the amount charged women could be brought low... or just free supply of drugs and necessary equipment to both government and private hospital. Another discussant suggested that welfare of workers should be taken seriously; according to her, prompt payment of their salaries will improve the interpersonal relationship with pregnant women thus promote early attendance among women. Other suggestions included employing more workers and posting them to rural health facilities, teaching women the benefits of early reporting during antenatal talks, or out-right use of persuasion.

Tests of hypotheses

Some assumptions that were made at the beginning of this project work were tested during the course of the analyses. The outcome variable, early and late reporting, was compared against some key variables of the research to determine their independent effect on one another. The summary of the results of each outcome is presented in table 4.17.

The first hypothesis states that there is no significant relationship between age of the respondents and time of reporting for ANC. The result showed a significant association between age and time of booking for ANC (df = 1, p = 0.047). Late booking was more among the older age group (61.7%) than the younger age group (50.9%). The hypothesis was therefore rejected.

The second hypothesis states that there is no relationship between the area of residence and the time of reporting. This relationship was not statistically significant (df = 2, p > 0.05). However, early initiation of care in pregnancy was practiced more among women resident in Idi (54.4%) than those in either Umuahi (41.2%) or Ngwo (38.3%) communities. The hypothesis was not rejected.

The third hypothesis states that there is no significant relationship between the highest educational qualification of respondents and their time of reporting for ANC. There was a strong statistical association between the two variables (df = 2, p = 0.001). Early returning to antenatal facilities was found to be more among women who had tertiary

education (60.2%) while those who had primary education had the highest tendency to report late (78.3%). This hypothesis was therefore rejected.

The fourth hypothesis states that there is no significant relationship between the employment status of women and time of reporting for ANC. Results showed that though more women aged 25-49 years who were employed (60.3%) booked late than those in younger age group. no significant association was found between age and employment status of women (df = 1, p >0.05). The hypothesis was therefore not rejected.

The fifth hypothesis states that there is no significant relationship between the number of pregnancy/pregnancies of women and the time of reporting. Result showed that there was a strong statistical relationship between parity (number of pregnancies) of a woman and her time of initiating ANC. Late reporting was more among those who have had more than two children than those with one or two children (df = 2, p = 0.001). This hypothesis was therefore rejected.

The sixth hypothesis states that there is no significant relationship between the knowledge of women about antenatal services in their community and their time of reporting for ANC. This hypothesis was rejected because knowledge about antenatal services was found to be statistically significant to the time of reporting for care (df = 2, p = 0.046). Early reporting was greatest among women who had good knowledge about ANC services in the community.

The seventh hypothesis states that there is no significant relationship between attitude of the women and time of reporting for ANC. Women with positive attitude (45.1%) to ANC tended to report early and a significant association was found to exist between the two variables (df = 1, p = 0.014). this hypothesis was therefore rejected.

Table 4.17. Results of relationships between some variables and time of reporting

	Time of reporting					
	Early	Late	Total	X^2	P value	Df
Age group	No. (%)	No. (%)				
15-24 years	53 (49.1)	55 (50.9)	108			
25-49 years	13 (38.3)	211 (61.7)	342	3.939	0.047	1
Area of residence						
Ngwo	118 (38.3)	190 (61.7)	308			
Udi	31 (54.4)	26 (45.6)	57	5.145	0.076	2
Umuahi	35 (41.2)	50 58.8)	85			
Highest education*						
Primary	15 (21.7)	54 78.3)	69			
Secondary	111(39.1)	173 (60.9)	284	25.237	0.001	2
Tertiary	56 (60.2)	37 (39.8)	93			
Marital status						
Married	180 (41.3)	255 (58.7)	266			
Others**	4 (26.7.0)	11 (73.3)	15	1.733	.209	1
Employment status						
Employed	123 (39.7)	184 (60.3)	305	0.580	.446	1
Unemployed	63 (43.4)	82 (56.6)	145			
Number of children						
1	68 (53.5)	59 (46.5)	127			
2	53 (45.7)	63 (54.3)	116	18.880	0.001	2
>2	63 (30.4)	144 (69.6)	207			
Knowledge about ANC						
Good	115 (46.0)	135 (54.0)	250			
Fair	15 (32.6)	31 (67.4)	46	6.168	0.046	2
Poor	54 (35.1)	100 (64.9)	154			
Attitude to ANC						
Positive	132 (45.1)	161 (54.6)	293			
Negative	52 (33.1)	105 (66.9)	157	6.020	0.014	1

Row percentages reported. *no formal education excluded (New N = 446) Percentage in bracket Row percentages reported. *no formal education excluded (New N = 446) **single, widowed and divorced collapsed.

CHAPTER FIVE

DISCUSSION

This study explored the factors associated with late reporting for ANC among women of child bearing age. In this chapter, explanation is given regarding the results presented in the previous chapter. The demographic characteristics of the respondents, their knowledge about ANC services in the communities and their attitudes towards ANC use were explored. The ANC practices of the study population in their immediate past pregnancy period were also examined and finally the factors associated with late reporting for care among them were highlighted. Implication of the findings of this study to health promotion and education was also discussed. Recommendations were made at the end of this report.

Demographic characteristics

The mean age of 27.7 ± 5.1 found in the study is expected as most of the study participants were at the peak of their reproductive years. This is consistent with the findings of an earlier study with similar population in Enugu state which found a mean age of 29.8 years (Ozumba and Nwogu-Ikojo, 2008) but differed with that in Uganda in which participants were younger having a mean age of 24.7±5.9 years (Kiwuwa and Mulubenga, 2008). The group was predominantly married women with Christianity being the religion practiced by virtually all of them. This is supported by a public health exchange report which highlighted Christianity as the predominant religion of the southern parts of Nigeria (Kupoin, 2005), and particularly the southeast to which the study area belongs. Use of maternal health services has been found to be high among women in Christian communities. Of the 9 respondents who were single, 77.8% were below 24 years and 22.2% were below 19 years. Pregnancy among this age group is likely to be unplanned and since teenage pregnancy is viewed with serious misgivings as the victims could suffer some social stigmatization and shame which could become barriers to reporting early for any meaningful ANC. However, early marriage is still practiced as about 86.7% of this age group was married. The risks of

pregnancies and childbirth among adolescents are numerous and could result in damage to the reproductive health organs, maternal mortality, and infertility, complication during pregnancies and childbirth and obstetric fistula (Rufus, 2006). Nevertheless, a study in southwest Nigeria showed that contrary to the popular belief, poor obstetric outcome of teenage pregnancy was related to non-utilization of prenatal care rather than their biological age (Ekanem, et. al., 2004). Although women in age group 25-49 years had a more positive attitude to ANC use, those in the younger age group (15-24 years) were more likely to register earlier. In order words, age was statistically significant to time of reporting (df = 1; p = .047).

Contrary to an earlier study in Enugu state which found a low literacy level of 13.5% and 21.5% of secondary and post-secondary education respectively (Ikeako, et. al., 2006) most women (83.8%) had a secondary or a tertiary education. A study in Benin Edo state, found that 87.5% of the study population either had secondary or tertiary education (Charoro and Igbafe (2000). This is probably an indication that female enrollment into schools in these parts of the country is increasing. It was noted that though more than half of the women were employed, as high as 52.7% of them were engaged in petty trading. With approximately one-quarter of the study population having no form of employment is an indication that the status of women is still on the low side and should be a cause for concern. The situation, made worse by the recent global economic melt-down could marginalise the benefits of maternal education in seeking care early in pregnancy. Many women might not be able to afford the cost of maternal health services thus have to depend on their husbands for income and decision making. The resultant effect of this could be booking at a later date.

Knowledge and opinion about antenatal services in the community

Accessibility and availability are important factors to use of health care services particularly antenatal services in any locality. Antenatal services are available and accessible at all levels of care in the area of study. That virtually all the women in this study affirmed this and could mention at least one facility where ANC could be obtained is evidence in this regard. Private facilities seemed the most popular health institutions among the women probably because, according to one FGD discussant, *they are more numerous in number are just around our homes and offer 24-hour*

services. This could also contribute to the reasons why more women received care from private than government or any other health facilities. However, with the recent government declaration of free medicare for all pregnant women and children in the state, public institutions are likely to begin gaining popularity once again. The findings are in line with the report of other surveys in which differences in geographical distribution of hospitals and health centres often located more in urban than rural areas have led to more accessibility of such services in the urban areas (Kupari, 2005). Despite the fact that many women knew that ANC attendants at the homes of the TBAs were unqualified personnel who acquired midwifery experiences through a period of apprenticeship, TBAs are still popular in all three communities. The reason adduced by a discussant was that.... *they give us the local medicines (ogwu igbo) which reduce the size of our babies and so make us deliver them easily.*

Another important factor to use of antenatal services is the quality of care rendered to women who present to the facilities. Quality in turn is often judged by the contents of ANC package. In harmony with the HBM, the framework for this study, women are likely to use ANC services effectively if they judge the individual contents of the package as being high and of benefit to them. Contrary to a study in Kenya, east Africa (van Eijk, Et al., 2006) women in this study reported a good number of services offered by the ANC facilities attended by them in their immediate last pregnancies. Women could report at least seven contents with health information, advice and counselling, and pre and postnatal exercises being the most frequently appreciated. Confirming their claims, all the key informants listed myriads of activities which they gave their patients during antenatal visits. It follows therefore that if women were aware of the contents of ANC package and especially the timing of these services they are likely to improve their uptake by making ensure that they booked early. In other words women may have to begin ANC early enough so as to maximise the benefit of these programmes. This was not the case with participants in this study. A good number still reported late despite that they knew the contents of the services. This was more among the multiparous women. Recently, there have been concerns over the quality of ANC services provided in Sub Saharan Africa (Brown, Sohani, Khan, Lilford and Mukhwana, 2008). It is important to note that the study participants were not so familiar with some antenatal services with proven benefits. Only a small proportion of the respondents thought they could receive iron supplements, tetanus

immunisation or IPT-SP against malaria. This could lead to low coverage of these preventive programmes as was the case with countries like Kenya (van Eijk, et al., 2006) and Uganda (Kiwuwa and Mufubenga, 2008). However, ascertaining if women were aware of timing and doses of each of these packages they are supposed to receive per pregnancy was beyond the scope of this study.

The low reporting of tetanus immunisation in this study which was also observed in a similar survey in Entebe, Uganda (Tann, Kizza, Morison, Mabey, Muwanga, Grosskurth, and Elliott, 2007) could stem from the fact that its provision has slightly declined among the multigravidae who should have received the recommended five doses during previous pregnancies. This group of women constituted the greatest proportion of the respondents used for this study. If the coverage of tetanus immunisation should remain low, then maternal and infant mortalities due to the infection would hardly be controlled. Brown et al, (2008) in their study demonstrated that a statistically significant relationship exists between ANC attendance and four behavioural decisions namely tetanus toxoid, IPT-SP, use of ITNs and the person assisting with delivery and place of delivery. This may be the case in Nigeria too if action is taken to forestall late attendance for ANC.

Women in this study generally, had just an average knowledge about the direct benefits of ANC programme. This is expected as majority of the women had just secondary education. It could also be the reason why only less than half of the respondents reported early for ANC. Only 11.1% of women felt that ANC was intended to address complications that might threaten the life of the woman or her baby. It is possible also that their knowledge about the benefits was shaped by different circumstances related to specific cultural settings. These circumstances in turn can be present in different environments such as the household, the community, the school and others. Generally, the factors that were found to have statistically significant associations with knowledge of women about ANC services were age ($p = 0.027$) and level of education ($p = 0.009$). Good knowledge was identified more among those in the older age group and those with tertiary education. While the former may have been influenced by previous pregnancy experiences, direct or indirect, the latter may have obtained knowledge through academics.

Women in this study had positive opinions about ANC facilities in their community. Majority were of the opinion that the facilities were not only sufficient in number but were close to the majority of women in the community. This is at variance with findings from other studies that far distances were associated with late reporting for ANC (Brown et al. 2008). Surprisingly most women rated the attitude of health care providers in most of the facilities in their community as friendly contrary to reports from many previous studies. Nonetheless, it is assumed that contact with health care institutions, and particularly health providers, are paramount in the shaping of women's views (Nigenda, Langer, Kuchaisit, Romero, Rojas, et al. 2003). It is therefore possible that since the majority of women in this study preferred the private facilities to any other facilities in the community, they are bound to describe their views based on the nature of the facilities they use edn their pregnancies. Private institutions are often known to be profit oriented and so tend to keep the behaviour of their staff under some kind of check. The resultant effect is that caregivers in these facilities tend to have friendlier disposition than those in the not-for-profit institutions such as government facilities. This notwithstanding, preventive and intervention strategies such as ANC programmes can still be used to improve pregnancy outcomes, and also efficiency and quality of care, particularly those aspects addressed by women in this study. It is also important that changes in an institution based programme such as ANC services are to be made, being sensitive to women's opinions will go a long way to producing effective results.

Attitude of women to use of antenatal services

In Idi Ora most women were well informed about the meaning of ANC and its health benefits to both the mother and the baby. This, together with a high literacy rate observed among them could be responsible for the high proportion of women with positive attitude to early reporting for care in pregnancy found in this study. More than two-thirds of respondents consented that women who waited beyond the first trimester before booking were taking a risk just as almost all of them concurred that the best time to register for ANC was in the first three months of pregnancy. Further verifications of respondents' claims revealed a kind of mix up in their belief about the appropriate time for booking. When asked in a separate question when a pregnant woman could be said to report early for ANC, almost two-third (74.7%) of women

reiterated that the first three months was considered early booking. 23.1% thought it was in the second trimester, and 2.0% thought it was the third trimester. Findings of a rural South African study also showed that 61% of participants stated that the first trimester was ideal for booking (Myer and Harrison, 2003). In order to confirm this, respondents were then asked to state out rightly which time they felt was late registration for ANC. To this, 68.0% of the respondents now said that last trimester was to be considered late reporting, while 2.2% now said they did not know. This ambivalent attitude was contained in the statements of two FGD discussants who said:

> *Booking early or late is acceptable, early booking is of great benefit because the pregnant woman collects her antenatal drugs, takes them making her healthy ... on the other hand if she considers herself healthy she can stay back at home.*

A teenage mother in another group said:

> *Both are okay. Booking early or late, it depends on your luck. If you're staying with an elderly woman like your mother or mother-in-law, she might tell you to register around 6 months. At the end of it all, you'll still have a safe delivery, they're more experienced and know how to handle pregnancies.*

Statistically however, attitude was found to be significantly associated to time of reporting with early reporting being more among those whose attitudes were positive ($p = 0.014$), however, not all those who had positive attitude reported early for ANC. More than half the number in this category still reported late to the facilities. Attitude was neither found to relate with age, level of education or parity of the respondents ($p > 0.05$). This behaviour of women could be multi factorial and is an area that may require further research.

Antenatal care practices of women

The median interval between delivery and the time of interview was 9.0 months with a range of 0-24 months. In line with the NDHS (2008), all participating women reported having visited an antenatal facility during their most recent pregnancy. More than half the number of the women (50.1%) booked late for ANC. This is in consonance with reports from other countries in Africa (Hamel, Odhacha, Roberts and Deming, 2001; van Eijk, et al., 2006) and other developing countries where late booking for ANC has

also been reported (Kambarami, et al., 1998; Jahn, 2000; Mwaniki, et al., 2002; Thuy Thi Trinh and Ruhin, 2006). About 40.9% of women in the study reported initiating ANC in the first trimester. Although the figure is unexpectedly high, this appears to be an improvement over findings of other studies in different parts of Nigeria where low ANC attendance in the first trimesters was reported. The finding was almost quadruple the result of less than 10% in a mission hospital in Ibadan, southwest Nigeria (Aluko and Ohwatosin, 2008), triple the result of 15.9%, 21% and 14.1% still in the southwest (Bawa et al, 2004; Pelzer and Ajegbomogun, 2005; Okunlola, et al., 2006), and double the result of 20.1% in the Niger delta (Ebeigbe and Igherase, 2005). The mean gestational age at first clinic attendance of 17.5±6.9 weeks is also an improvement over the findings of other reports viz: 23.7 weeks (Ohaeto and Igbafe, 2000); 23.1±10.1 weeks (Ebeigbe and Igberase, 2005) and 21.82±7.0 weeks (Okunlola, et al., 2006). Even in the two years preceeding the new millennium, Ekele and Audu (1998) had found a mean gestational age at booking of 23 weeks in Sokoto, Nigeria. However, these results could be the outcome effect of the method used for data collection for this study. Since the women's claims could not be verified it is possible that they may have overestimated their time of reporting for ANC or may have suffered bias due to recall. However, this result still differs markedly from findings in most developed countries and some developing countries where the vast majority of pregnant women present early for ANC (al-Shammari et al., 1994; El-Kak, Chaaya, Campbell, and Haddour, 2004; Raatikainen et al., 2007).

Corroborating another study in Equatorial Guinea (Jimoh, 2003), the decision to initiate ANC was taken by husband in 14.9% of women showing that a significant proportion of women still depend on their husband to take crucial decisions such as health care services. The FGD discussants explained that such women may have to depend on their husbands for income otherwise in the event of trouble she may be abandoned to fate. This finding however is a great improvement from the 52% of husband interference in Ohaeto and Igbafe study.

A closer look at the reasons given by women for registering the time they did showed that most women had more than one reason for reporting early or late. Majority reported early because it was their first pregnancy, a little above half reported as a result of sickness in the early stage while one-third reported without having any reason

at all other than they just felt like booking at the time they chose. Most women who registered early because it was their first pregnancy were in the younger age group whereas those who registered because of sickness and no particular reasons were mostly those in the older age group. In a study by Lamina (2004) 72% of women gave no reason for choosing the time of antenatal booking. The only explanation for this could be that the first timers have no idea about pregnancy and are more likely to have fear of the unknown due to inexperience. The older women, on the other hand, might have had experience(s) thus may likely postpone booking till a later stage. This is supported by the result of a similar study in Ibadan, southwest Nigeria, which found nulliparity and illness in the index pregnancy as strong factors that favoured early reporting (Okunlola, et al., 2006).

More than half the proportion of the women preferred using the private facilities. The major reasons given for such practice were that they took good care of women and had better qualified workers. This could also be viewed from the stand point that most women often prefer to obtain care from female care givers especially in pregnancy periods. As one respondent described in the IDI *... everything apart, you see, these women (nurses and midwives) are more experienced than the doctors (males).* This was also reflected in the results shown on table 4.2 in which respondents had high value results for nurses. They really referred to any female in health facilities as nurses, while males were regarded as doctors.

The traditional model of ANC that provides for up to 15 to 18 visits is still being practiced in Nigeria. In Udi LGA, all the health facility personnel interviewed attested to this. Some private facilities even follow an exaggerated pattern of care. One provider said he preferred women to have a total of three visits- one in each trimester, while another planned that pregnant women are given bi-weekly appointments irrespective of time of booking till delivery. In the latter case, a woman who registered at first trimester may have to make between 18 to 20 visits. The costs of services notwithstanding, the woman may get disenchanted with her care. The mean number of visits (X=4.6) per women observed in this study is beyond the recommended minimum number of visits in the new WHO model of care. While twelve percent of women made less than the required minimum number only 6.4% made the required four visits to the facilities. The fact that the majority of women made between five and ten visits

shows that the findings of this study corroborated an earlier study by Bawa et al. (2004) which reported a facility visit of less than 10 visits by a high proportion of women. The implication is that if the WHO new model of care will be adopted in Nigeria, a lot of mobilization would have to be done with both the health personnel and the women themselves.

If as studies had shown, a strong relationship exists between antenatal utilization and delivery by trained health personnel, it could be adduced therefore that women in this study had a high chance of being assisted by a trained personnel. With most women utilizing private hospitals and government institutions is an indication that there is a rising awareness of women to proper use of ANC facilities of proven benefit. The usual high service charges by private institutions did not seem to deter most women from preferring them despite the high unemployment rate found among them. It follows therefore, that economic constraint was far from being a factor to late reporting. This finding was confirmed by the fact that employment status was not found to be significantly associated with time of reporting. Surprisingly, late registration was found to be more prevalent among women in employment. This positive health-seeking behaviour among pregnant women has to be encouraged in order to ensure advancement towards achievement of the MDG-5.

Women's knowledge about consequences of late reporting for antenatal care

traditions are very important in Igbo culture but current economic and social reality is making people change their views about the importance of sticking to traditions in the context of modernity. For instance, women in this study demonstrated a high level perception of consequences of late reporting for ANC to the mother and her child and even consequences beyond delivery. This ideal could scarcely translate to practice as many women still reported late for care notwithstanding the fact that they could enumerate numerous consequences of such action. In line with the HBM framework, Igbo women have a lot of myths surrounding pregnancy, among which are that pregnancy is not an illness and one does not have to say she is pregnant until she starts feeling the movement of the baby inside her. In which case, the pregnancy must have got to an advanced stage. Unless women perceive themselves as susceptible to

developing complications in either pregnancy or childbirth they are not likely going to initiate steps that will offer any meaningful security. However, other factors/cues to action such as exposure to modern technologies, interpersonal relationship with significant others, etc may have contributed to the high level of perception observed among the study participants.

Factors that hinder early reporting for antenatal care

Women in this study were exhaustive in listing the various reasons why pregnant women would report late for ANC. Top on their list was a feeling of wellness. This buttresses the point that the cultural belief that pregnancy is not a disease is a strong factor late reporting especially when it is considered alongside the reasons given by women why they booked the time they did. It could be recalled that a good number of subjects booked early because they fell ill at the early stage of the pregnancy. Majority of the unbooked participants Bawa et al study made no facility visit because they believed that everything was normal.

Another reason proffered by women was lack of money to pay for the cost of ANC services as well as other indirect costs such as transportation. True the cost of booking for ANC varies from one facility to another, ANC remains a cost effective programme. Some women also understand this as some FGD discussants were of the opinion that, *no amount of money we are asked to pay will equate with the babies we have been blessed with*. Banta (2003) noted that an increasing number of complex examinations and interventions are becoming parts of modern ANC such that an average pregnant woman in many countries receives 150 or more specific tests/examinations/interventions during pregnancy. Some of these tests/examinations can be deferred for low risk cases in order to reduce costs. In a poor, low resource setting like Nigeria where a lot of people are living below poverty level, any amount of charge will lay strain on the already distressed economy of families and individuals and the condition is worse in rural areas. High cost of services as a reason for low preference of government facility in a study by Osubor, et al. Limited financial resources were one of the major reasons given by women for non-use of ANC in a rural community in Kano, Nigeria (Adamu and Salihu, 2002). Private facilities are most often more costly than public hospitals yet women in this study had a high

preference for them. It therefore follows that cost may not be a primary barrier for women in this study. Enugu state government has recently declared free maternity services for women up to six weeks post partum. The sustainability of this kind of venture is doubtful since the WHO estimated that the average cost of ANC services was about US $3000 per pregnant woman in 1996 and this is likely to have increased. But contrary to the belief some studies have revealed that women still report late for care even in facilities where services are free (Ruatikainen, et al., 2007). A study in Mozambique demonstrated that women's fear of their pregnancies being a target of sorcery by jealous neighbours and families made them hide their pregnancies. Instead of seeking free prenatal care at nearest health clinics these women visited nonmedical prophets, pastors, and traditional healers who understand women's vulnerabilities (Chapman, 2003). Health-seeking behaviours of women will likely improve if they are assured of confidential maternity care and economic security.

Women also noted that long trekking distances was a factor to poor utilisation of ANC among women in the study area. Magadi et al. (2000) also observed that long distance to the nearest ANC facility was an obstacle to ANC. But only one woman in this study mentioned that distance was responsible for her poor use of ANC. That the generality of the respondents were unaffected by distance in the study was explained by a contributor in the FGDs:

> (The facilities) are located around our homes. Those who live far may spend just about 20 Naira on transportation.

Bawa, et al. (2004) reported that distance from the facility had no statistically significant association with delivery in a health facility. What is of import for rural women is availability of public transport but not the distance to a hospital or clinic (Swenson et al, 1993).

Suggested ways of improving early reporting for antenatal care

Women themselves made several suggestions about how attendance to ANC can be improved. The four major ways were offering free antenatal services to all pregnant women, creating awareness through the use of radios and television programmes, reducing ANC charges in both private and public hospitals and giving women

incentives such as snacks and drinks at booking clinics. Other suggestions include public and individual health education, citing more government health centres especially in rural areas, better attitude of health workers especially in public hospitals, advice and counselling, improving quality of services and by making ANC compulsory. More light was thrown into some of these suggestions during the FGDs. For instance, to tackle the attitude of care providers in especially public hospitals, women opined:

> *Organisations/committees that will monitor the nurses especially in government (hospitals) should be set up to counsel them and ensure they go about their duties the right way – with patience.*

And:

> *Taking workers' welfare seriously and prompt payment of their salaries will improve the way they treat pregnant women and this will encourage us to come early. If they keep shouting at us nobody will want to come.*

Health care providers also made the following suggestion when they were interviewed:

> *Constant education on benefits of early booking, public enlightenment through the media, churches, home visitation, women associations, town announcer, economic empowerment for women microcredit ventures, making antenatal care free for all pregnant women, improving the attitude of health workers especially in government owned facilities, construction of good roads in rural areas to ease transportation problems, and proper saving and planning for the rainy day.*

Implication for health promotion and education

Three major components of health promotion were clearly defined in the national health promotion and education policy and its strategic framework plan. These include health education, service improvement and advocacy (FMOH, 2006; FMOH, 2007). By health education component, information is directed to individuals, families and communities to influence their knowledge, attitudes and skills; service improvement could be achieved through improvement in quality and quantity of service availability, outreach and input supplies, and advocacy involves activities directed at policy makers to influence laws and policies concerning the direction of services and enforcement of laws.

This study has identified reasons behind the poor ANC seeking-behaviour among women of child-bearing age. A substantive proportion of women reported late for ANC mainly due to misconceptions about pregnancy. The root causes of these misconceptions are inadequate knowledge about the associated benefits of ANC. Furthermore, the old traditional risk-approach that separates pregnant women into high and low risk cases is still being predominantly used by all the health care facilities in the state. Addressing this problem goes beyond the individual women themselves and extends to all stakeholders including health care providers and policy makers. Accordingly, and within the ambit of health promotion and education and the HBM framework of this study, health education, improvement of service delivery and advocacy approaches can be used to address this problem.

The impact of information and communication on behaviour change cannot be over emphasized. Information, Education and Communication (IEC) materials can be designed to address the gaps between knowledge and practice or outright knowledge deficit as the case may be. Health education should be targeted at all women generally. Individual or group process approach or better still a combination of both methods can be used to inform women about the benefits of not only antenatal but maternal health services generally. Individualized approaches that may be used include one-on-one discussion, advice and counselling and home visitation. Group teaching may be done through peer education, seminars and workshops including mass media. Civil organizations, professional bodies, charity based organizations (CBOs) and faith-based organizations (FBOs) as well as philanthropic and voluntary agencies concerned with safe motherhood can work together to tackle the problem.

Health empowerment approach through which sufficient information are made available to individuals to enable them make informed choices especially in matters that concern them is an effective method of improving the status quo. A long term objective of girl child and preconception education for all females can also become useful tools for providing information for health literacy and self efficacy. Women interest groups in form of unions, associations and organisations can be mobilized to sponsor educational intervention programmes by providing funds or logistics that will help sustain the programmes.

Advocacy component can be done in form of visiting and speaking with different cadres of stakeholders at the family, community and government levels. At the family levels, husbands as heads of families are important change agents. Educational programmes can be designed to provide information for them to enlighten them also on the benefits of early reporting for ANC. This can be extended to community and religious leaders since they are known to influence people's behaviour positively. At the government level, bye-laws and evidence-based polices backed by appropriate legislation can be formulated at all levels of care. Policy guidelines could contain plans for training and retraining of health care providers with the purpose of disseminating knowledge and skills for best practice.

Conclusion

Considering the total fertility rate of 5.7 births per woman (FMOH, 2004), pregnancies play an important role in the lives of most Nigerian women, and favourable pregnancy outcomes are of particular interest, for both current and future generations. Antenatal care has been named as one of the four pillars of SMI, one among many strategies to combat maternal mortality and morbidity. The objectives of ANC as a health preventive measure is better achieved if women commenced care at the first trimester of pregnancy. It is unfortunate then that 68% of women who sought any form of ANC from modern health care providers such as doctors, nurses and midwives in 1999 dropped to 58.8% in 2003. Nonetheless, a considerable number of those seeking ANC do not make proper use of it and initiate care only late in pregnancy. This poor practice of women has precluded them from full utilization of many interventions with proven benefits.

This study revealed that there was a high prevalence of late reporting for care during pregnancy among women of child-bearing age in Udi LGA, Nigeria. Though there was a high level of awareness about the meaning of ANC, knowledge about the direct benefits of such care and the appropriate time of registration was inadequate. Women perceived pregnancy as a normal phenomenon and so would only commence early for ANC either because of inexperience (usually in the first pregnancy) or sickness. A substantive proportion of women booked late because of a feeling of wellness and a belief that reducing the number of facility visits will help reduce costs. Furthermore,

the current guidelines for obstetrics and gynaecological care still specifies the use of the standard model of care that emphasizes up to 10-15 visits with myriads of non specific procedures and tests that only add to increase cost per unit care. However, late reporting increases a woman's risks of developing complications. This problem must be tackled if the objectives of MDG-5 must be achieved. Health education directed at the woman and various stakeholders is highly advocated

Recommendations

In view of the findings of this project the following recommendations are made

1. The study revealed a high level of misconception about pregnancy among women. Adequate information about the concept of pregnancy should be provided to women in form of health talks in clinics, churches, and other social gatherings like village meetings. Appropriate IEC materials should be designed to contain messages that specifically address these myths and misconceptions. The influence of health care providers as well as other change agents like teachers and religious leaders will be effective in this regard.

2. Inadequate knowledge about the benefits of early reporting and incongruence of attitudes of women and practice about early reporting found in this study can be tackled through educational interventions like advice and counselling, individual and panel discussions, workshops and seminars organized and coordinated by health care providers. Involving women at every stage of the programme will strengthen the efforts of all the group and increase confidence and self efficacy.

3. Women's behaviours with regard to decision-making and choices are often influenced by their husbands, other relatives and peers especially during pregnancy. Educational intervention programmes targeting the husbands and significant others can be designed to improve decision making and appropriate choices in pregnancy.

4. Advocacy visits and campaigns that will increase girl child and preconception education should be undertaken by government and other interest groups. Pregnancy and risk complications including the importance of ANC in

reducing complications during pregnancy and childbirth should become topical issues in the school curriculum.

5. Administrative efforts that will reintroduce the use of community public health officers who are skilled in community and family care into the PHC system should be accelerated. Adequate plans should also be made by appropriate government to remunerate them accordingly.

6. Guidelines that will introduce the more evidence-based cost effective FANC should be formulated and adopted for use in Nigeria to minimize most of the barriers that women encounter while receiving ANC. Under this guideline, training and re-training of heath care providers as recommended by WHO should be followed conscientiously to improve facility attendance and service delivery.

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APPENDIX : 2

QUESTIONNAIRE (English version)

FACTORS ASSOCIATED WITH LATE REPORTING FOR ANTENATAL CARE AMONG WOMEN OF CHILDBEARING AGE IN UDI L.G.A., ENUGU STATE

Introduction

Good morning Madam. My name is Emily Okeke. I am a postgraduate student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. I am conducting a study and need to collect data to find out why women are booking late for antenatal care. I request that you honestly and sincerely answer the questions I shall ask you. The information you shall provide is for the purpose of the study and will be kept in strict confidence and will not be held against you. However, your participation is voluntary. You are also free to pull out at any time you wish. Thank you.

Please, would you like to participate? (1) Yes (2) No

Serial Number———— Interviewer's Name.....

Date..... Time started..... Time ended.....

Date last delivery.....

Please fill in the responses. Tick (√) where appropriate.

Section I: Socio- Demographic Data

1. Age last birthday (in years)- ————————————
2. Marital Status (1) Single (2) Married (3) Separated (4) Divorced 5) widowed
3. Ethnic group 1) Igbo 2) Hausa 3) Yoruba 4) others (specify).....
4. Religion: 1) Christianity (2) Islam (3) Traditional (4) others (specify).....
5. Highest level of Education: (1) No formal education 2) Primary 3) Secondary 4) Tertiary 5) others (specify).....
6. Occupation (State exactly).....
7. Husband's occupation (State exactly).....
8. Total number of births.....

Section 2: ANC practices of mothers during the last confinement

Please tell me what ANC is all about .....

It is about taking care of pregnant women and the babies in their wombs.

1) Yes 2) No 3) Others (specify) .....

9. When did you book for antenatal care in your last pregnancy? (State exactly) .....

10. Why did you book at that time? (DO NOT READ OUT. Tick as many as apply) a) I was sick b) it was my 1st Pregnancy c) I thought it wise to book at that time d) others specify .....

11. The decision to book at that period was taken by whom? 1) Myself 2) my husband 3) both of us others (specify) .....

12. Which facility did you use? 1) Govt. facility 2) private facility 3) TBA 4) others (specify).....

13. Why did you prefer to book at that place? (Tick as many as apply) a) It was close 1) Yes 2) No b) their staff are qualified 1) Yes 2) No .Their services are cheap 1) Yes 2) No 4) they like good care of women 1) Yes 2) No 5) others (specify).....

14. How many ANC visits did you make before delivery? (State exactly).....

15. Did you keep all your appointments? 1) Yes 2) No

16. If no. why? .....

17. At what month of their pregnancies do the majority of women in this community register for antenatal care? 1) 1-3mths 2) 4-6mths 3) 7-9mths 4) I don't know

18. How many times, at least, do the majority visit before delivery? (State exactly).....

19. How regularly do the majority keep appointments? 1) Very regularly 2) regularly 3) not regularly 4) I don't know

Section 3: Knowledge and opinion about antenatal services in the community

20. When is the most appropriate time to register? 1) 1-3mths 2) 4-6mths 3) 7-9mths 4) I don't know

21. How many times at least, should a woman visit before she puts to bed? (State exactly).....

22. How regularly should a pregnant woman keep her antenatal care appointments? 1) Very regularly 2) regularly 3) not regularly 4) I don't know

23. Please tell me all the benefits of antenatal care (DO NOT READ OUT. Tick all that apply)

	Items	Tick
a.	Helps to know the state and position of the baby in the womb	
b.	Mother and baby's conditions are continuously assessed and monitored.	
c.	Mother has opportunity to get adequate care in pregnancy.	
d.	Mother gets health educated on many issues.	
e.	Mother gets counseling and advice about what to do and what not to do.	
f.	Any hidden illness or abnormality is detected.	
g.	Some immunizations are given e.g. tetanus toxoid.	
h.	Helps a mother and the health provider plan for delivery.	
i.	Sick mothers are treated.	
j.	Others (specify)	

24. Tell me the different places pregnant women get antenatal care in this community? (DO NOT READ OUT. Tick all that apply) 1) Private hospital/maternity 2) Govt. hospital/maternity 3) Traditional delivery home 4) Prayer houses (5) others (Specify) ....

25. Mention the calibre of people who render antenatal care in the different places you mentioned (DO NOT READ OUT. Tick as many as apply)

1. Private hospital/maternity 1) Nurses only 2) nurses and doctors 3) others (specify).....
2. Govt. hospital/maternity 1) Nurses only 2) nurses and doctors 3) others (specify).....
3. TBAs 1) Nurses only 2) nurses and doctors 3) nurses by apprentice 4) others (specify).....

4. Prayer house 1) Nurses only 2) nurse and doctors 3) nurses by apprentice others (specify).....

26. Which facility do the majority of women patronize most? 1) Govt. facilities 2) private facilities 3) TBAs

27. Which facility do the majority of pregnant women patronize most? 1) private facility 2) govt. facility

3) TBAS 4) Prayer house 5) I don't know

28. What things are usually done for pregnant women when they report for antenatal care in those places? (DO NOT READ OUT. Tick all that apply)

	Services	Tick
a.	Health talks	
b.	Advice & Counselling	
c.	Weighing	
d.	Blood pressure checks	
e.	Urine testing	
e.	Blood tests	
f.	Palpating the abdomen	
g.	Malaria prevention treatment	
h.	Tetanus immunization	
i.	Treatment of some illnesses	
j.	Giving antenatal drugs	
k.	Exercise	
l.	Others (specify)	

29. What can you say about the antenatal services in this community generally?

(READ) (OUT)

	Statements	Yes	No	I don't kn
a)	Are the places available?			
b)	Are they sufficient for the people?			
c)	Is there enough staff there?			
d)	Do you think their staff is qualified?			
e)	Is their staff friendly?			
f)	Do you think the places are close to the majority of the people?			
g)	Are there enough equipment and drugs?			

h)	In your opinion do they provide duality services?			
i)	Do you think the services are affordable by the majority of the people?			

j) What other things can you say about the services? 1)..... .....

2)..... 3) .....

Section 4: Attitude to use of antenatal care

30- To each of the following questions I will read out to you, please state if you agree, disagree or undecided (READ OUT PLEASE)

	Statement	Agree	Disagree	Undecided
A.	Most services rendered to mothers during antenatal care are of great benefit.			
B.	Every pregnant woman should obtain antenatal for all her pregnancies			
C.	Every pregnant mother should take ANC seriously.			
D.	Those who feel healthy may register when it is convenient for them.			
E.	Pregnant women should decide when and where she may register for ANC			
F.	It does not matter when a pregnant mother registers for antenatal care.			
G.	A pregnant woman should register early for antenatal care only in her first pregnancy			
H	Early registration for ANC is not cost-effective.			
I.	It is a risk for a pregnant woman to wait for so long before she registers for antenatal care			
J.	Those who register late may not obtain most of the benefits of antenatal care.			
K.	Only those who can afford it may register early for antenatal care			
L.	Late registration for ANC can cause delay in gening help in time of emergency			
M.	I will advice my friend neighbor to register early if she becomes pregnant.			
N.	I will register after six months if I am not sick.			
O.	Early registration should be made compulsory for every pregnant woman			
P.	Whether a pregnant mother registers early or not what will happen will happen			

Q	It is best to register within the first 3 months of pregnancy.			

Section 5: Factors that Hinder early reporting

31. What things can make a woman book early? **(DO NOT READ OUT. Tick as many as apply)**

a) Feeling sick at the early stage. 1) Yes 2) No
b) Primigravida (first pregnancy) 1) Yes 2) No
c) Complication in previous pregnancy. 1) Yes 2) No
d) Previous neonatal death. 1) Yes 2) No
e) Free antenatal services 1) Yes 2) No
f) If the woman is enlightened 1) Yes 2) No
g) If she has money 1) Yes 2) No
Others (specify).....

32. At what time could you say a pregnant woman booked late?

(1) 1-3 months (2) 4 – 6months (3) 7-9 months 4) I don't know

33. What things can make a woman book late? **(DO NOT READ OUT. Tick as many as apply)**

	Reasons	Tick
1)	Feeling of wellness (there is nothing wrong with me)	
2)	Lack of money (poverty)	
3)	Ignorance of benefits of early reporting	
4)	Multiparity	
5)	Laisez-faire (I don't care) attitude toward antenatal care.	
6)	Alternative options like the chemist/patient medicine vendors and TBA	
7)	Dislike for hospitals (associating hospital with sickness)	
8)	Long waiting time at antenatal clinics	
9)	Long trekking distances	
10)	When health workers are not friendly	

11) Others (specify) .....

Section 6: Consequences of late booking

34. What in your opinion are the consequences of booking late? (DO NOT READ)

(MULT. Tick as many as apply)

	Statement	Tick
a.	The woman may run into trouble whose cause may have been detected early and prevented.	
b.	She may miss the opportunity of learning many things	
c.	Some preventive measures like tetanus toxoid may not be completed	
d.	She may have hidden problems that may badly affect the baby e.g. HIV or jaundice	
e.	She may not plan well for delivery	
f.	Others (specify)	

Section 7: Ways to improve early booking

35. Please suggest the different ways women can be made to start booking early

i. .....

ii. .....

iii. .....

iv. .....

v. .....

APPENDIX: 3

ỊGBA NJỤ (QUESTIONNAIRE: Igbo version)

IHE GBASARA EDE BENYEGHI AHA N'OGE N'ETITI ỤMỤ NWANYỊ KA NA TỤ IME NA OKPURI OCHỊCHỊ UDI, STETI ENUGU

Nkọwa

Nne anam ekene. Aha m bu Emily Okeke. Abu m nwata akwukwo na Ngalaba na-akwalite ahụ Ike na Mmụta, N'ulo akwụkwọ ahụ ike, Mahadum Ibadan. A nam eme ihe ọmụmụ na nnyocha ichọputa ihe na ebula edebanyeghi aha n'oge maka ilekọta afọ ime n'ebe ụmụ nwanyị nọ. Achọrọ m ka ijiri eziokwu zaa ajụjụ ndị m ga aju. Ihe ọbụla ịzara banyere ihe ọmụmụ a, agaghị ejide gị maka ya ma ọbụ kwe ka onye ọzọ nụ ya. Ozokwa, ọ bụghị na mmanye. Inwekwara ike ịkwụsị mgbe ọbụla ọmasịrị gị.

Ekenekwa m ọzọ.

Biko, ọbụ mmasị gị isonye? (1) Omasịrị m (2) Ọmasịghị m

Akala …… Aha onye ọjụ ajụjụ ………… Ubọchi ahụ (deti) …………………… Elekele mmalite ……….. Elekere ịkwụsị ………………… Ubọchi imụlụ nwa ikpeazụ ……………………

Biko, jenye ihe mere. Kanye (✓) ebe o dabara.

Agba nke mbụ: Nkọwa banyere onye

1. Arọ ole ịdị mgbe ị mụrụ nwa ikpeazụ……………………………
2. Alụ m di (1) Alụghị m (2) Alụrụ m (3) Any gbasara (4) Anyị esela (5) Ajadu
3. Asụsụ (1) Igbo (2) Hausa (3) Yoruba (4) Ndị ọzọ (ịkọwaa)……………………
4. Okpukpere chi: (1) Onye ụka (2) Onye alakuba (3) Onye ọgọ mmụọ (4) Ndị ọzọ (ịkọwaa)……………………………
5. Ebe ọmụmụadebere: (1) Ejeghi akwụkwọ (2) Praimari (3) Sekọndịrị (4) Mahadum (5) Ndị ọzọ (ikọwaa)……………………………
6. Aka ọlụ gị (kpọọ aha ihe ị na alụ)……………………………………
7. Aka ọlụ di gị (kọwaa ihe ọ na alụ)……………………………………
8. Umuola unu ole? ……………………………………

Agba nke abụọ: Agwa nwanyị banyere nlekọta n'afọ ime ikpeazụ

9. Biko gwa m ihe bụ ilekọta afọ ime…………………………

Ọ bụ ịlekọta ụmụ nwanyị dị ime na nwa ha bụ n'afọ (1) Ẹẹ (2) Ẹẹ-ẹẹ (3) Ndị ọzọ (ịkọwaa)..............................

10. Kedụ mgbe idebanyere aha maka nlekọta afọ ime na ime ikpeazụ gị? (kpọọ ya)..........................

11. Gịnị mere ịjiri debanye aha oge ahụ? (AGỤPỤTAKWALA. Kachie ndị dabanyere) (a) Ariara m ọrịa (b) Ọ bụ ime mbụ m (ch) Echere na ọka n'ma idebanye aha mgbe ahụ (d) Ndị ọzọ (ịkọwaa)..........................

12. Onye kpebiri ka idebanye aha mgbe ahụ? (1) Onwe m (2) Di m (3) Mụ na di m (4) Ndị ọzọ (ịkọwaa)..........................

13. Olee ebe imere ya? (1) Na nke gọọmenti (2) Na nke onwe (3) Ndị na-eji ime n'ụdị ọdịnala (4) Nd ọzọ (ịkọwaa)..........................

14. Gịnị mere ịjiri horọ idebanye n'ebe ahụ? (Kachie ndị danyere) (a) Ọ dị m nso (1) Ẹẹ (2) Ẹẹ-ẹẹ (b) Ndị ọlụ ha tozuru etozu (1) Ẹẹ (2) Ẹẹ-ẹẹ (ch) Ego ha dị ala (1) Ẹẹ (2) Ẹẹ-ẹẹ (d) Ha na-elekọta ụmụ nwanyị nke ọma (1) Ẹẹ (2) Ẹẹ-ẹẹ (e) Ndị ọzọ (ịkọwaa)..........................

15. Ugboro ole ka ịjere nlekọta afọ ime tupu imụọ nwa (kwuwaa)..........................

16. Ijezuru mgbe akanyere ya? (1) Ẹẹ (2) Ẹẹ-ẹẹ

17. I sị ẹẹ-ẹẹ, gịnị kpatara ya?..........................

18. Ihe dika n'ọnwa nke ole n'afọ ime ka ọtụtụ ụmụ nwanyị ndị obodo a jị edebanye aha maka nlekọta afọ ime? (1) n'agbata ọnwa mbụ na ọnwa atọ (2) n'ọnwa anọ rue ọnwa isii (3) ọnwa asaa rue ọnwa itegheté (4) Amaghị m

19. Opekata mpe, ihe dika ugboro ole ka ọtụtụ ụmụ nwanyị dị ime na eje nlekọta afọ ime tupu ha amụọ nwa? (kwuwaa)..........................

20. Ha ana agachi ya anya nke ọma mgbe ọbịa akanyere? (1) mgbe n'ile ọbụla (2) mgbe nile (3) mgbe ụfọdụ (4) amaghị m

Agba nke atọ: Akọ na echiche banyere ka esi elekọta afọ ime n'obodo a.

21. Kedụ mgbe kachasị mma idenye aha? (1) ọnwa mbụ rue ọnwa atọ (2) ọnwa anọ rue ọnwa isii (3) ọnwa asaa rue ọnwa itegheté (4) amaghị m

22. Opekata mpe, ugboro ole ka nwanyị kwesịrị ije tupu ọmụọ nwa? (kwuwaa)..........................

23. Kedụ ka o sị kwesị ndị nwanyị dị ime ga elezu nlekọta afọ ime mgbe akanyere ya? (1) mgbe nile ọbụla (2) mgbe nile (3) mgbe ụfọdụ (4) amaghị m

24. Biko gwa m etele dum dị na ilekọta afọ ime. (AGỤPỤTAKWALA. Kachie ndị dabanyere)

	Nchepụta	Akara
a.	Ọ na enye aka na imara ụmụọdụ na ka nwa siri nọrọ n'afọ	
b.	A na elekọta ka nne na nwa dị mgbe nile	
ch.	Nne na enwe ohere nlekọta zuru oke n'afọ ime	
d.	Nne na enweta mmụta ahụ ike n'ọrụrụ ihe	
e.	Nne na enweta ndụmọdụ na ụzọ mgbanu ime banyere ihe okwesịrị ime na ndị nkwesighị ime	
f.	Ana achọpụta nria nria nile ọbụla zoro ezo	
g.	Ana agba ọgwụ mgbochi ufodu, ọmatụ ọgwụ nje *tetanus*	
gb.	Ọ na enyere nne na onye ọlụ ahụ ike aka ịkwadebe maka ọmụmụ nwa	
gh.	Nne na arịa ọrịa na enweta ọgwụgwọ	
h.	Ndị ọzọ (kọwaa)	

25. Gwa m ebe dị iche iche ụmụnwanyị dị ime na ejegasị enweta nlekọta afọ ime n'obodo a? (AGỤPỤTAKWALA. Kachie ndị dabanyere) (1) Ụlọ ọgwụ/ebe ịmụ nwa nke onwe (2) ụlọ ọgwụ/ebe ịmụ nwa nke gọọmentị (3) ndị na-eji ime n'ụdị ọdịnala (4) ụlọ ekpere (5) ndị ọzọ (ịkọwaa)........................

26. Kwupụta ụdị ndị na enye nlekọta afọ ime n'ebe ndị ahụ (AGỤPỤTAKWALA. Kachie ndị dabanyere)

1. Ụlọ ọgwụ/ebe ịmụ nwa nke onwe (1) nanị ndị nọọsụ (2) ndị nọọsụ na ndị dọkịnta (3) ndị ọzọ (kwuwaa)..............................
2. Ụlọ ọgwụ/ebe ịmụ nwa nke gọọmentị (1) nanị ndị nọọsụ (2) ndị nọọsụ na ndị dọkịnta (3) ndị ọzọ (kwuwaa)..............................
3. Ndị na-eji ime n'ụdị ọdịnala (1) nanị ndị nọọsụ (2) ndị nọọsụ na ndị dọkịnta (3) ndị ọzọ (kwuwaa)..............................
4. Ụlọ ekpere (1) nanị ndị nọọsụ (2) ndị nọọsụ na ndị dọkịnta (3) ndị ọzọ (kwuwaa)..............................

27. Kedu nke ọtụtụ ụmụ nwanyị kasị eje na ya? (1) Nke gọọmentị (2) nke onwe (3) ndị na-ejị ime n'ụdị ọdịnala

28. Kedu nke ọtụtụ ụmụ nwanyị kasị eje? (1) nke gọọmentị (2) nke onwe (3) ndị na-ejị ime n'ụdị ọdịnala (4) ụlọ ekpere (5) nnagha ọ

29. Ọ bụ gịnị ka ụna emere ụmụ nwanyị n'ebe nlekọta ndị a? (AGỤ PỤTAKWA. Kachie ndị dabanyere)

	Ije ozi	Akara
a.	Okwu ahụ ike	
b.	Ndụmọdụ na agbam ume	
ch.	Nlele ibu	
d.	Inyocha ọbara	
e.	Inyocha ainjị	
f.	Ilele afọ	
g.	Igbochi/igwọ ọrịa jọọ	
gb.	Igba ọgwụ mgbochi nje *tetanus*	
gh.	Igwọ nrịa nrịa dị iche iche	
h.	Inye ọgwụ nlekọta afọ ime	
k.	Imeziputa anụ	
kp.	Ndị ọzọ (kọwa)	

30. Gịnị ka inwere ikwu gbasara ka-esi elekọta afọ ime n'obodo a? (ỊCHỌTA)

	Ihe ngụpụta	Ee	Ee-ee	Amaghị m
a.	I he ndị a ha adị nso inweta?			
b.	Ha na ezuru ndị bi n'obodo a?			
ch.	Inwezuru ndị ọlụ n'ebe ndị a?			
d.	Iehere na ndị ọlụ ha tozuru etozu?			
e.	Ndị ọlụ ha enwere ohi ọma?			
f.	Iehere na ebe ndị a dị nso nye ọtụtụ nụnaụ?			
g.	Akara ngwa na ọgwụ ezuru oke na ebe ndị a?			
gb.	N'uche aka gị, iehere na ha n'enye nlekọta zuru oke?			
gh.	Iehere na ọdịri ọtụtụ ndị nụnaụ nfe ikwụ ụgwọ nlekọta a?			

j. Kedu ihe ndị ọzọ inwere ikwu banyere ịje ozi ha? (1) ....
(2)..(3)..

Agba nụ iteanụ: Akpara m agwa nye ilekọta afọ ime

31. Na ajụjụ ọbụla ndị a m ga agụpụtara gị, kwupụta ka ikwere, ikweghị, ma ọbụ na ikpebibeghị. (GỤPỤTA HA)

	Ihe agụpụta	Ekwere m	Ekweghim	Ekpebighim
a.	Ọtụtụ n'ime ihe ndị ana emere ndị nne na nlekọta afọ ime a bara oke uru			
b.	Nwanyị ọbụla dị ime kwesịrị ịje nlekọta n'afọ ime ya ọbụla			
ch.	Nwanyị ọbụla dị ime kwesịrị ikpọ nlekọta n mkpa			
d.	Ndị ọbụ gbasịrị ike nwere ike idebanye aha mgbe ọmasịrị ha			
e.	Ọnụ nwanyị dị ime kwesịrị ịji aka ha kpebie ebe na mgbe ha ga eje debanye aha maka nlekọta a			
f.	Mgbe ọbụla nwanyị dị ime jiri debanye aha maka nlekọta a enweghị ihe omere			
g.	O bụ naanị na afọ ime nke mbụ ka nwanyị kwesịrị idebanye aha n'oge maka nlekọta			
gb.	Elele di na idebanye aha n'oge maka nlekọta a elughị ka ego ana emefuru ya			
gh.	Edebanyeghị aha n'oge maka nlekọta a bụ ọghọm dịrị nwanyị dị ime			
h.	Ndị na edebanyeghị aha n'oge maka nlekọta a nwere ike ha agaghị enwelachaa elele di na ya			
i.	Nani ndị ga akwụhie ugwọ ya nwere			

	ike idebanye aha n'oge			
i.	Idebanyeghi aha n'oge maka nlekọta a nwere ike idọghachi aka elekere enyem aka azụ maka ọ dọọ na mberede			
j.	Aga m adụ enyi/agbata obi m ọdụ ka o debanye aha n'oge ma ọdịrị ime			
k.	A ga m edebanye aha mgbe ọgasịrị ọnwa nke isii ma ọbụrụ na ahụ sịrị m ike			
kp.	Idebanye aha n'oge ga abụ iwu dịrị nwanyị ọhụla dị ime			
kw.	Mụ nwanyị dị ime edebanyere aha n'oge ma odebanyeghị. ihe ọbụla ga-eme ga eme			
l.	Ọkachasị mma idebanye aha na mgbe ọnwa nke ato			

Agba nke ise: Ihe ndị n'egbochi ije n'oge

32. Gịnị pụrụ ime ka nwanyị debanye aha n'oge? (**AGBỤPỤTAKWALA. Kachie ndị dabanyere**)

a. Irịa ọrịa na mmalite afọ ime (1) Ee (2) Ee-ee

b. Afọ ime ọnụ (1) Ee (2) Ee-ee

ch. Ọdachi n' afọ ime gara nga (1) Ee (2) Ee-ee

d. Onwu nwa n'oge gara aga (1) Ee (2) Ee-ee

e. Ilekọta afọ ime n'efu (1) Ee (2) Ee-ee

f. Mụ ọbụrụ na nwanyị ghara nke ọma (1) Ee (2) Ee-ee

g. Mụ ọbụrụ na o nwere ego (1) Ee (2) Ee-ee

Ndị ọzọ (ikowa) .....

33. Kedu mgbe Ị gasị na nwanyị dị ime edebanyeghị aha n'oge? (1) ọnwa mbụ rue ọnwa atọ (2) ọnwa anọ rue ọnwa isii (3) ọnwa asaa rue ọnwa iteghete (4)amaghịm

34. Ihe ndị gịrị ga-eme ka nwanyị ghara idebanye aha n'oge? **(AGỤPỤTAKWALA. Kachie ndị dabanyere)**

	Ihe nwere ike ibuta ya	Akara
1.	Ọ dịka anụ esiri m ike	
2.	Ụkọ ego ogbenye	
3.	Amaghị uru dị na ịje n'oge	
4.	Onye luwororo ime ọtụtụ ugboro	
5.	Ejighị ilekọta alọ ime kpọrọ ihe	
6.	Inwe ebe ndị ọzọ dịka ndị na-ere ọgwụ na ndị ọgwụ igbo	
7.	Enweghị mmasị n'ụlọ ọgwụ	
8.	Oke igbu oge n'ebe nlekọta	
9.	Ogologo ije	
10.	Ndị ọlụ ahụ ike enweghị obi ọma	

11. Ndị ọzọ (ịkọwaa) ....

Agba nke isii: Ihe na-adapụta n'edebanyeghị aha n'oge.

35. N'uche gị, kedu ihe ichere nwere ike ịdapụta n'edebanyeghị aha n'oge? **(AGỤPỤTAKWALA. Kachie ndị dabanyere)**

	Ihe nsụpụta	Akara
a.	Nwanyị nwere ike ịdaba na nsogbu akara ịchọpụta ma gbochie n'oge	
b.	Ọbere imụta ọtụtụ ihe nwere ike ịgbanarị ya	
ch	Enwere ike o gaghị ejezu usoro mgbochi ọrịa ụfọdụ dịka nke nje fetanus	
d.	Ọnwere ike nwe ọrịa ọzọ ezo nwere ike imetụta nwa nke ọjọ, imolụ, nje HIV ma ọbụ ịhụ ọcha n'anya	
e.	Ọnwere ike nwa ya enwela ezi nkwadebe maka ọmụmụ nwa	

f. Ndị ọzọ (ịkọwaa) ....

Agba nke asaa: Ụzọ imezi idenye aha n'oge.

36. Biko chepụta otutu uzo isi mee ka umụ nwanyị bido bia debanyebe aha n'oge.

i. .....

ii. .....

iii. .....

iv. .....

v. .....

APPENDIX: 4

FGD GUIDE (English version)

FACTORS ASSOCIATED WITH LATE REPORTING TO ANTENATAL CARE AMONG WOMEN OF CHILDBEARING AGE

Good day. My name is Emily Okeke. I thank you all for agreeing to take part in this discussion. I will be moderating our discussion today. This discussion is a research work that intends to find out some vital information on pregnant mothers and use of antenatal care services. During this discussion, no views expressed by any participant will be judged right or wrong and everybody is free to express her views on any issue pertinent to the topic. This discussion will remain completely confidential and will only be used for the purpose of the research project. Thank you for your cooperation.

1. Please, tell us how pregnant women in this community take care of their pregnancy. Probe:
   i. The different places where they go to get care;
   ii. Different types of services rendered to them in those places;
   iii. Types of personnel who render services in those places;
   iv. Which of the places women patronize most;
   v. Why it is most patronized.
2. Tell us why it is important for pregnant women to get antenatal care. Probe:
   i. The benefits of getting antenatal care;
   ii. Consequences of not getting antenatal care;
   iii. Benefits of seeking antenatal care early in pregnancy;
   iv. Consequences of seeking antenatal care late in pregnancy.
3. Let us discuss how pregnant women in this community utilize these antenatal services. Probe:
   i. The categories of pregnant women who seek care- primips, multips, sick women, women with problems, etc.
   ii. At what stage in their pregnancy the majority of women begin to seek care i.e. when the majority book for antenatal care: 1st, 2nd or 3rd three months.

iii. How many visits they make before delivery,

iv. Frequency of the visit,

v. Which one of the pregnancies care is sought most and why

4. Talking about early and late booking for antenatal care, which time is considered early and which time is late? Probe:

i. What things would make a pregnant woman book early?

ii. What things could make her book late?

iii. Which is better, early or late booking? Why?

iv. In what ways can women be made to book early for antenatal care?

5. What is the possible problems women encounter by reason of their being pregnant?

6. Who usually decides where and when a pregnant woman should book for antenatal care in this community? Probe: why?

7. What difficulties do women encounter while using the antenatal services community? Probe:

i. Availability of health facilities

ii. Accessibility

iii. Affordability

iv. Attitude of care providers

8. Suggest ways of overcoming each of the problems that were mentioned

APPENDIX: 5

FGD GUIDE (Igbo version)

NCHỊKỌTA NKE IHE DỊ ICHE-ICHE N'AKPATA NA ỤMỤNWANYỊ KA NA-AMỤ NWA ANAGHỊ EJE N'OGE EDEBANYE AHA HA MAKA NLETA AHỤ IKE OGE HA DỊ IME

Ndị banyị ekenee ni unu. Aham bu Emily Okeke. Ekenee m unu ọzọ, n'ihi na unu kwenyere iso mee ntughari uche nkea. Mkparịta ụka nke anyị ga-eme ugbua bụ nnyocha na nnule nke anyị n'eme banyere ụmụnwanyị di ime na unu ọ bara na ha jere n'oge debenye aha n'ebe di iche iche ana eleta ha na nwa ha bu n'afọ anya.

Mgbe anyị n'eme mkparịta ụka nkea, onye ọbụla nwere ikike ikwu ihe bụ uche ya. N'otu akaahukwa, ọdịghị echiche ọhị nke onye ọbụna ọgasị na ozighi ezi m'ọbụ na ọ kasi mma.

Biko, ihe nine nke anyị ga-akpa ubụghị ihe aga eji wee mere akụkọ n'okpolo ụzọ. Nani ihe m g'eji ha mee bụ ide edemede maka nyocha na nchọpụtụ nke anyị ji n'aka ugbua. Ekenee m unu n'ihi aka unu nyelu m ikpokoba mkparịta ụka nkea.

1. Biko gwakene anyị etu ụmụnwanyị di ime n'ubodo a si akpachapụtụ onwe ha anya mgbe ha bu afọ ime. **Nyocha nke oma:-**
    - i. Ebe dị iche iche ha na-aga ka eleta ha anya.
    - ii. Ụdị nleta anya m'ebu enyemaka di iche iche ana enye ha n'ebe ndia ga.
    - iii. Ụdị ndị ọlụ enwegalụ n'ebe ahụ n'enye ụmụnwanyị ndị nleta ahụ ike a.
    - iv. N'ime ebe ndị ahụ gasị, kedụ ebe nke ụmụnwanyị ndị di ime na-ejekarịarịcha?
    - v. Gịnị mere ụmụnwanyị ji ejekarịsị ebe nkea ị kpọrọ aha?

2. Gwakene anyị ihe i chere oji dị nke mkpa na aga eletarịrị ụmụnwanyị dị ime ahụ tupu ha amụọ nwa. **Nyocha nke oma:-**
    - i. Etu dị n'nleta nwanyị dị ime ahụ tupu ọ mụọ nwa.
    - ii. Ihe ọghom nwere ike ịdakwasị nwanyị nke n'ejeghi nleta ahụ ike tupu ọ mụọ nwa.

iii. Ulu nwanyị dị ime na-erna m'ọhụlụ na o jee n'oge ka eleta ya ahụ tupu ọ mụọ nwa.

iv. Ihe ọghom na-adakwasị nwanyị nke n'amaliteghi jee debenye aha ya n'oge maka nleta ahụ ikea mgbe ọ ka-dị ime.

3. Ka anyị kpaliṭakene ụka banyelụ etu ụmụnwanyị dị ime n'ogbe a si ejetadebe nyabụ nleta ahụ ike tupu ha ana mụọ nwa. Nyochaa nke ọma:-

i. Kedụ ụdị ụmụnwanyị di iche iche dị ime na-achọ nleta ahụ ike – ọ bụ ndị ime nke mbụ ha, ma ọ bụ ndị ime one m'one, ọ bụ ndị n'enwe nsogbụ ahụ ike, nt'ọ bụ nsogbụ ọbụna?

ii. N'onwa ole ha dị ime ka ọtụtụ n'ime ụmụnwanyị ndịa ji amalite ije nleta ahụ ike? O bụ n'onwa nke mbụ, ka o bụ n'onwa nke ato etc.?

iii. Ughọlo ole ka ha n'eje maka nletea tupu ha amụọ nwa?

iv. Ha n'ejechikwa anya m'ohụ jezụe nletea etụ ndi na eleta ha ahu ike si nye ntụzi aka tupu ha amụọ nwa?

v. N' ime nke one ka ụmụnwanyị na-enwekaljeha masị ije ka eleta ha anya? Ginị kpatara ọjị dị etụ a?

4. Ekwube mgbe nwanyị dị ime kwesịrị ịji je debanye aha ya n'ebe ana eleta ha anya, ole mgbe enwere ike isi na o jere n'oge, olee oge ha na o jeghi n'oge? Nyochaa nke oma:-

i. Kedụ ihe nwegasiri ike ime nwanyị dị ime k'ojee debanye aha ya n'oge?

ii. Kedụ ihe nwegasikwara ike ime ka-oghara ejena nyahu ndebanye aha n'oge?

iii. Olee nke ka mma, idebanye aha n'oge ka ọbu edebanyeghị aha n'oge? Gịnị mere nke i kwuru ji kara mma?

iv. Kedu ihe ole ma ole nwere ike ime ka nwanyị dị ime jere n'oge debanye aha ya maka nlete ahu ike?

v. Olee uzo dị iche iche enwere ike ịjị mee ka ụmụnwanyị jee debanyebe aha ha n'oge ma ha dị ime?

6. N'oghe a, kedụ onye obụ karịsị olụ ya ikwụ ebe, n'oge, nwayị dị ime kwesịrị ịga denye aha n'ụlo ogwụ maka ilete ya ahụ tupu omụọ nwa? Kedụ ihe ojiri dị etụ ahụ?

7 N'ogbe a kedu ihe bụ ogbata uhie nke ụmụnwanyị dị ime na agabiga n'ije ụlọ ogwụ ka elele ha anya tupu ha amụọ nwa. Nyochaa nke ndịa:-

i. Ebe ana elitagasị ha anya adịkwalị adị n'ogbe a?

ii. Kedụ k'o si dị nfe n'obu ma ahụ ịjịegide nne ebe ahụ ga?

iii. Aka ndị ụmụnwanyị choro ya ano elukwa ya?

iv. Kedụ ọtụ ndị n'alụ n'ụlọ ndịa si emeso ụmụnwanyị dị ime mgbe ha bịara ka elele ha ahụ

8 Tunyekene elo ụzọ dị iche iche ichere agha eji gbochie ogbata uhie ndịa

Ekele m unu. Dalụ nụ.

APPENDIX: 6

KEY INFORMANT INTERVIEW GUIDE FOR ANC PROVIDERS IN HEALTH INSTITUTIONS

Good Morning Ma/Sir. My name is Emily, C. Okeke from Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan. I am conducting a research on the above topic. You have been considered for this interview based on your position and services you render to mothers in this community. I request you talk to me about women's use of ANC services based on your experience. I am also interested in the factors that contribute to women's late reporting for care during pregnancy. I assure you that all information you provide will be treated with utmost confidentiality and will be used for the purpose of this research only. Your name and address are not required, thank you. Please note that participation is voluntary and you may withdraw at any stage you wish. Thank you.

Type of health worker (tick (√) one)

i. Nurse Midwife
ii. Doctor
iii. CHEW (Snr./Jnr.)
iv. TBA

Type of Health Facility (tick (√) one)

i. Government hospital / health centre
ii. Private hospital / clinic
iii. Traditional delivery home

How long in years have you been providing antenatal care to women in this community?

1. Please, tell us about antenatal care
2. May we know the importance of antenatal care? Probe for consequences of not getting the care
3. Let us discuss how pregnant women in this community use antenatal care services generally

Probe:

i. Which places are they getting antenatal care?
ii. At what stage in their pregnancy do they often report or book?
iii. How many visits do the majority make before delivery?
iv. What is the frequency of visit?
v. What is the minimum number of visits required?

vi. What categories of women seek antenatal care?

vii. In which of their pregnancies seek care most?

4 Looking at early and late booking, which time are women said to have booked early and which time is regarded as late?

a) What things could make them book early?

b) What things could make them book late?

c) What are the consequences of late booking?

d) What in your opinion are the benefits of booking early?

e) What are the complaint women give when they book early?

5 Please, let us hear the different types of antenatal services that are rendered to women in your health facility.

6 What can you say about the antenatal services in this community?

Probe:

i. Are the services available?

ii. Are they affordable?

iii. How accessible are they?

iv. Are they sufficient? Etc

7. Who usually decides when and where a pregnant woman should get antenatal care? Why?

8. How could women be made to start booking early for antenatal care?

9. What problems do women encounter generally in the course of using antenatal services within community?

10. Suggested ways of solving each of the problems mentioned above?

Thank you for participating

APPENDIX: 7

KEY INFORMANT INTERVIEW GUIDE (Igbo version)

KEY INFORMANT INTERVIEW GUIDE: FOR ANTENATAL CARE PROVIDERS IN HEALTH INSTITUTIONS

Aham bu Emily Okeke. Esim na ulo akwukwo nke Mahadum Ibadan, ngalaba nke ndi na akwalite ahu ike wee bia. Anam eme nchoputa na ntule gbasara nleta a n'eleta umunwanyi di ime bu nke akporo antenatal care n'oyibo. Site na amamihe unu, onodu unu n'etiti ndi mmadu n'ezi nmeso unu n'emeso ndi nne n'etiti unu n'ogbe a, enwerem nkwenye na mkwasi obi n'unu ga enyere m ezigbo aka n'olu nchoputa a m n'eme n'ogbe unu. Ya mere umu nnem ejim obi nile wee rio unu ka unu gwa m ihe nile unu mara gbasara olu ndi nne na-etite site n'olu ndi n'elete maka ahu ike na odi mma umunwanyi ndi di ime n'alu n'etiti unu. O ga-aso m nke ukwuu isite n'aka unu mata ihe kpatara umunyanyi di ime ji egbu oge nke ukwuu, tupu ha eje denye aha ha n'ulo ogwu maka ile ha ahu mgbe ha di ime. Ekwe m unu nkwa, na ihe nile nke m na unu ga akpa eba, enweghi nke aga-eji kpa nkata n'okpolo uzo, kama aga m eji ha wee dee edemede nchoputa a mbagidere. O dighi mkpa I gwam aha gi m'obu ebe I bi. Onweghikwa iwu bagidere gi ma I choghi isonye anyi na mkpalita uka a m'obu na ihapuru anyi jebere onwe gi mgbe soro gi oge osoro gi.

Ugbua, k'anyi malite uka anyi

Kedu udi onye olu ahu ike nke I bu? Kedu udi ulo ogwu I na-alu olu ahu ike nke a? Afo ole k'ilagolu olu nleta umunwanyi di ime n'obodo a?

1. Biko gwakene anyi gbasara nleta umunwanyi di ime n'obodo a.

2. Kowakenelu anyi olu o bara nwanyi di ime ije ka elete ya ahu? Nyocha nke ona: Ogbom diri onye n'ejeghi nleta ahu a.

3. Ka anyi tugharia uche ka umunwanyi di ime n'obodo a si ejegasi nnyocha ahu a tupu ha a mulo nwa ha. Nyocha nke ona:

   i. Olee ebe di iche-iche ha na anata nleta ahu a?
   ii. Kedu oge ha ji eje maka idebanye aha izizi n'ebe nleta ahu a?
   iii. Ugboro ole ka onwu n'ime ha n'eje nleta ahu ike a tupu ha a mulu nwa ha?
   iv. Olee usoro ha ji eje nleta ahu a?

v. Opekata ụpe, ugboro ole ka elere anya na nwanyị dị ime ga eje maka nleta ahụ ike a tupu ọ mụọ nwa ya?

vi. Kedụ umụnwanyị dịgasị dị ime n'eje maka nleta ahụ ike a?

vii. N'ime afọ ime nke ole ka ha na-ejekaliịsị nleta ahụ ike nkea?

4. I lee anya n'oge nwanyị ji eje edeba aha, kedụ ingbe ụ ga – asị na o jere n'oge, ma ọbụ na ojeghị n'oge?

i. Kedụ ihe ndị nwere ike ime ha ejee n'oge debanye aha maka ile ha ahụ?

ii. Kedụ ihe ndị nwere ike igbochi ka ghara ije debanye aha ha n'oge?

iii. Kedụ ọghọm dị n'ejeghị debanye aha n'oge?

iv. N'uche gị, kedụ ulu dị n'idebanye aha n'oge?

v. Kedụ ihe mkpesa ụmụnwanyị ndịa debanyere aha n'oge n'ekpesa n'ihi na ha debanyere aha ha n'oge?

5. Biko gwakene anyị udị nleta ahụ dị iche-iche unu n'enye ụmụnwanyị n'ebe nleta ahụa.

6. Kedụ ihe I nwere ikwu maka udị nleta dị iche-iche enwere n'obodo a? Na uchuu nke unu:

i. Ihe ndịahụ kwesịrị n'aga enye ma ọ bụ n'aga emere ha, ọ dị adị?

ii. Ọ bụrụ na ihe ndịa dị, ọnụ ego ha abụkwa nke aka ụmụnwanyị ahụ ga enwe ike kwụọ?

iii. Kedụ ka osị dịrị ụmụnwanyị a nfe, ma ọbụ siere ha ike, ije ebe ulọ ahụ-ike ndịa dị?

iv. Ihe ahụ-ike ndịa, o zuru oke nye ụmụnwanyị ndịa dị ime bụkwa ndị cholụ ya?

7. Onye na-ekpebi ingbe na ebe nwanyị dị ime na-eje maka ezi nleta ahụ? Ụmụ kpalara ya?

8. Kedụ ka aga esi mee ka ụmụnwanyị dị ime hido jebe n'oge ga idenye aha ha maka ezi nleta ahụ?

9. Kedụ ọgbara ohie dịrị ụmụnwanyị dị ime maka na ha na-eje ebe dị iche iche anata nyocha ahụ ike n'obodo a?

10. Kedụ ka a ga-esi gbochie ọgbara ohie ndịa I gụrụ ura?

Ekelee m unu. Dalụ nụ.