AN ASSESSMENT OF THE IMPACT OF PRIMARY HEALTH CARE DELIVERY SYSTEMS IN IGABI LOCAL GOVERNMENT AREA OF KADUNA STATE.

BY

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DECLARATION

I hereby declare that the thesis entitled “An assessment of the impact of primary health care delivery systems in Igabi local government” was written by me under the supervision of Professor M. Mamman and Dr. J.G. Laah. It is a record of my own research work, except where reference is made to published literatures and duly acknowledge. It has not been presented for any degree or examination at any university.

_____ _____

Abu, Ibrahim John Date

CERTIFICATION

This thesis titled "AN ASSESSMENT OF THE IMPACT OF PRIMARY HEALTH CARE DELIVERY SYSTEMS IN IGABI LOCAL GOVERNMENT OF KADUNA STATE" by Abu, Ibrahim John, meets the regulations governing the award of the degree of Masters of Science in Geography, Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literacy presentation.

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DEDICATION

This thesis is dedicated to my wife Mrs. Henriatta Abu, my Children and my late brother Mr. Gabriel Timbwak Abu.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This thesis presents finding on the impact of health care (PHC) delivery system in Igabi Local Government Area (LGA). The aim of study is to access the impact of PHC delivery system in Igabi Local Government Area of Kaduna state. Data from the study was derived from the administration of a structured Questionnaire, Focus group discussion and data from Hospital records. A total of 516 questionnaires representing 0.12 percent of the entire population were administered with the help of some research assistants. A total of 435 questionnaires were used for analysis which was carried out through the use of computer software, SPSS version 9, entry and cleaning. This indicates a sources rate of 84.3 percent. The result represents the socio economic characteristics of the respondents, their interaction with one another and their influences on the impact of PHC delivery system. The result shows that there are 435 respondents, 53.1percent are males and 46.9 percent females this is attributed to the fact that men were more accessible than women at the time of the survey. About 66.7 percent were married and all the married about 62 percent are in polygamous union and 63.7 percent of the respondents were secondary education with no significant disparity in gender. Among the employed, 27.1 percent and 17.7 percent are farmers and civil servants respectively and most of the respondents (76.7 percent) Live on less than 15,000 Naira per month, while about 51.7 percent are living in a one room apartment. The finding also reveals that 62.5 percent of the respondents indicate that between one to two (1-2) children have died before the age of two years, 82 percent indicate that between one to three (1-3) children died before the age of five years while 64 percent indicate that their friends and relatives have died from pregnancy and childbirth. This clearly shows that infant, child and maternal mortality is high in the area. A very striking finding shows that malaria fever is the major cause o ill health in the area which represent 44.8 percent of the respondents and this is followed by typhoid fever (17.2) percent. The study also shows that 52.9 percent of the respondents are not living within the 0-4 kilometers WHO recommendation of a health care facility. Decision making among the respondents on treatment during pregnancy and childbirth shown that husbands and mother-in-law play a prominent role (44.5 percent), and 41.1 percent of the respondents indicate that antenatal patients wait for many hours (4-8) before they are attended to by a health care personnel. The mass media and government information services are the most powerful sources of information about modern health care delivery system

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Improving health throughout the world is a gigantic task requiring global cooperation. The international health care system was first recognized at the first international scientific conference in 1851 (Shunom, 2006), after which the World Health Organization (WHO) introduced a system of cooperation against the spread of diseases. A WHO conference held in Alma-Ata in 1978, proclaimed Primary Health Care (PHC), as a concept that calls for the overall promotion of health by supporting the individual, the family and the community, by defining the active participation of the community, their needs and ways to meet them (Ogbole, 1981).

Studies have shown that the problems confronting Nigeria in areas of health are many, ranging from poor finance, equipment, shortage of manpower to the unwillingness of few health professionals to work in rural areas (Brieger, 1980; Obionu, 2007). The health care delivery system which gives emphasis on erection of magnificent buildings and provision of sophisticated equipment to serve a few urban dwellers is known to be inadequate. Investing on such health delivery system will not ensure that basic health care services are made available to the masses to achieve the objectives of health for all.

In practice therefore, no government (including Nigeria) has enough financial sources needed to meet the health needs of the population. For this reason, a new strategy for health care delivery system is worth considering, for it is a determination of the government to bring health care within the reach of every one particularly the under privileged who have been left out of health (FMOH, 2004).

In Kaduna State and indeed Nigeria, the spectacular thing about PHC implementation especially at the local government level is the self-help projects approach, which is aimed at involving the people to achieve health through their own efforts, to enable them enjoy improved socio-economic activities and increase their productivity. It can thus be seen that there is a strong emphasis on people's participation in the implementation of PHC (Massoud, 2007).

PHC as it affects the Local Government Areas (LGAs) (including Igabi LGA) in Nigeria mobilizes other sectors such as education, agriculture, housing- as well as health, thus enables full use of available community and national resources. It centers around nine(9) core functions health education, promotion of food supply, drinking water and sanitation, maternal and child mortality including family planning, immunization, prevention and control of endemic and epidemic diseases, treatment of common diseases and injuries, provision of essential drugs and elderly and handicapped care (Guidelines NHP, 1988).

Studies on health have also shown that there is a direct link between health and the economy. The less healthy a people, the less their ability to produce, and the less their ability to produce, the more depleted their economy, and the more depleted their economy, the lower their economic ability to obtain healthy and nourishing food. It is a vicious circle whose potentially regressive consequences are a national and not simply a local concern (Ohwona, 1981).

Thus, a healthy population is an economic asset since the assured supply of a strong and healthy labour force is an essential factor for development. For sustainable development in Kaduna state and indeed Nigeria, appropriate provision and equitable distribution of

health care services are very indispensable for rapid socio-economic development of the population.

One of the main goals of the third national development plan in Nigeria was the provision of basic social services such as pipe born water, health care centres, feeder roads and electricity (Federal Government Nigeria, 1975). This goal was meant to provide a positive impact in the rural areas because of the importance attached to health status of the population.

PHC was officially introduced in Nigeria in 1987, before then in 1986, Igabi was a district under the then Zaria LGA, when the federal government strategically selected some 52 out of the then 301 LGAs in the country, Zaria and Dutsen-ma were selected as the two model areas in the former Kaduna State. (Ishaq, 1994). Although the program was said to have made progress, its goal of 90percent coverage was excessively ambitious, especially in view of the economic strains of the structural adjustment that affected the Nigerian economy throughout the late 1980s.

Igabi LGA today as in most parts of Nigeria is faced with high population growth, high poverty level accompanied by illiteracy and ignorance, poor nutrition, rampant superstitious beliefs, taboos and other related health risk and problems such as inadequate sanitation, unsafe drinking water and high rate of environmental pollution. These conditions have encouraged high prevalence cases of both infant and adult diseases such as measles, diarrhoea, tuberculosis, cardio vascular diseases and other respiratory infections. Also, deadly diseases such as Human Immune Deficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) and other Sexually Transmitted Diseases/Sexually Transmitted Infections (STDs/STIs) are particularly worrisome in Kaduna State (Laah and Mamman,

2002). There is also growing number of child mortality aged 0-4 years, maternal mortality is also high. Consequently, life expectancy is lower than expected. It is therefore necessary that we understand the vital role of health in both the curative and most especially the preventive services of our health care delivery system. It is against this background that this study on PHC in Igabi LGA of Kaduna State is being carried out. The study attempts to explore the impact and challenges of PHC delivery system with the intension of generating data for policy and planning.

1.2 Statement of the Problem

PHC has been found to be the key to the attainment of the goal of health for all, because it is an integral part of both the country's health care system and the overall social and economic development of a nation (Kuti *et al*, 1991). It has been described as the essential health care which has been made simple, relevant and easily accessible to all individuals in a community through the full participation of its members by means that are acceptable. Despite the crucial role adduced to good health status and the pronouncement made by the government at all levels, the provisions of appropriate health care delivery services in Nigeria has been marginal or even non-existing. The explanation often given is lack of funds and other resources to provide such facilities to rural areas, where about 75 percent of the population reside (Datong, 1988).

In 1987, the federal government of Nigeria launched the PHC system as the bedrock of the health policy, with optimism that the system will reduce substantially the morbidity and mortality afflicted in our population by frequent outbreaks of preventable diseases. Several strategies were put in place to achieve this laudable dream; they include; health education and health promotion programmes; provision of infrastructure to health care

centres; provision of adequate and quality staff through training and recruitment' implement the rollback malaria through the promotion and use of Insecticide Treated Nets (ITNs) especially to children and pregnant women; improved nutritional status of children and increase the rate of immunization coverage; raise awareness on HIV/AIDS pandemic and tuberculosis control program and reduction of the present rate of infant and maternal mortality through the management of childhood illness and reproductive health programme. Tragically two decades since the introduction of the PHC the impact of these strategies have not been well documented in general, and are likely to be limited judging from the rising trends of preventable diseases in Igabi LGA. It will be interesting to know the effectiveness of these strategies from results of this research.

The major causes of deaths in Igabi LGA as in most of Nigeria include; infectious and parasitic diseases; defective malnutrition maternal morbidity and closely spaced and too frequent pregnancies; infant mortality and lack of health care and other social/ environmental and economic conditions (Parakoyi, 1999). As a consequence, life expectancy is short and productivity is very low, attempts to eradicate these diseases have been negligible. There are a number of socio-cultural issues that seem to be amplifying these problems, these include gender disparities which are reflected in the generally low status of women compared with men, disparities in education, health and economic opportunity, gender-based violence, child labour, avoidance of certain foods and the method used in the preparation of food. There is need to understand how these affect and influence the health condition of the general population in Igabi LGA.

Research on PHC delivery system has revealed that the major problems in most rural communities in Nigeria is the existing health care system, which do not reflect the health

needs of the population. Poor health care services have been blamed on inadequacy of essential facilities, insufficient referral system, inappropriate health information system lack of community participation, lack of transparency and accountability in governance and lack incentive of the health care staff, many of whom are demoralized (Adcmola, 1981; Ishaq, 1994; Okpala, 1999 and Massoud, 2007). These problems are exacerbated by the persistence regional inequalities in the location of few available facilities in Favor of the urban areas (Datong, 1988). It is interesting to note that most communities in Igabi LGA live in scattered farmsteads, hamlets and village settlements. Most of these rural communities are cut-off from the basic service centers by lack of good roads or transport facilities especially in the raining season when most roads become impassable. As a consequence, many people are forced to rely on alternative medicine, self medication, buying of high cost drugs in rural markets and more dependent on quacks. How these factors affect PHC in Igabi will be the focus of this study.

Though issues on health care delivery system in Nigeria are much discussed (Stocks, 1980; Datong, 1988; Adeyemi; 1999; Massoud, 2007), very little is currently known about the problems of PHC delivery in Igabi LGA. The existing literature suggest that PHC has failed to reach the majority of people at the grass roots because there is no sufficient referral system, lack of health education, poor management, unstable government and lack of political will and commitment (Bwala, 1981; Adcgoroye, 1984; Surungbe, 1990; Parakoyi, 1999). The only available data known to the researcher is that by Shunom (2006), his study was on the impact of PHC in Jaba LGA of Kaduna State. Igabi LGA is therefore used as a case study so as to provide empirical data. Since the impact of PHC has not been studied in

Igabi LGA, this research will attempt to provide useful beginning by asking he following questions;

- How has the programme been implemented in Igabi LGA?
- What facilities have been put in place?
- What is the level or extent of involvement of the people in the implementation of PHC system in the study area?
- What are the factors responsible for various diseases, and the measures taken by the LGA to address these problems?
- What is the impact of PHC on the well-being of the people?

1.3 Aim and Objectives

The aim of this research is to assess the impact of PHC delivery system in Igabi LGA of Kaduna State. This aim will be achieved through the following objectives;

i. To assess the nature and type of existing health care system in the study area.
ii. To examine the major causes of ill-health in Igabi LGA.
iii. To assess resources available for the running of PHC programme.
iv. To examine the relevant contributions of the community to the PHC programme in the area.
v. To assess the impact of PHC on the well being of the people in Igabi LGA.

1.4 Hypothesis

Some writers have argued that heath problems and accessibility to health care are poor in rural areas and their origin may be socio-cultural, economic, environmental and political. About 30 years ago, at Alma-Ata, WHO declared; Health for All by the year 2000 and

beyond". This concept implies that everybody in the world shall be free from mental physical and social stresses. Since then, this clam remains an illusion.

In the light of the foregoing, the basic hypothesis this study seeks to test therefore are as follows:

i. That the low level of education has led to lack of community participating in PHC in the area.

ii. There is no significant Relationship Between Income Status and their Utilization of PHC Services.

iii. There is no significant relation between immunization and treatment of maternal and child health.

iv. There is no significant relationship between distance of the PHC centres and the health care seekers from their homes.

1.5 Scope and Delimitation of the Study.

The study covers the twelve wards in the study area, and they include: Afaka, Birnin Yaro, Gwaraji, Igabi, Kwarau, Kerawa Panshanu, Rigasa, Rigachikun, Sabon Birni, Turunku and Zango Aya. Because our interest is to assess the impact of PHC delivery system in Igabi LGA, the main variable under consideration is the socio-economic and demographic characteristics of the population (age, sex, marital status, ethnic group, education, occupation, income and religion) within the study area. The focus is an the impact of both curative and preventive health care services in the area.

1.6 Significance of the Study.

While the fundamental principles enunciated at Alma-Ata conference on PHC in 1978 has been recognized by all the countries, there are divergences in the interpretation and application of PHC in various countries and by various people. For some it is the primary level care by community health extension officers (CHOs) and traditional birth attendants (TBAs) and for others it is the prevention and promotion of health programmes to be carried out at the health centres. In the light of this, the need and purpose of studies of PHC cannot be overemphasize.

Assessing the impact of this PHC delivery system will give an insight of the quality of the population and also highlight some of the major issues in the provision of PHC delivery system. Some of these issues include; immunization against the major infections diseases, prevention and control of locally endemic and epidemic diseases, maternal and education on prevailing health problems and the provision of essential drugs.

Undertaking a study of this nature will be useful for policy makers in reviewing their policies and programmes to deal with health related problems at various levels. Again, authorities may find the results useful in refocusing their plans activities on how to provide and effectively manage the health care system in Nigeria, including Igabi LGA.

Fatalism and placing of a low value on life are not surprising responses to the general misery of poverty and sickness in developing countries, including Nigeria. Thus, diseases lead to pessimism and reluctance among the poor and under privileged to invest in the future. Studies of this kind will help to convince people on the magnitude of the spread of diseases and infirmity. This implies that knowledge about the prevention of diseases brings the possibility of a brighter future; from the short view to long view of life; from

pessimism to optimism and from fatalism to realism. This attitude change will help the people embrace development projects and more likely to accept innovations.

1.7 Operational Terms

PHC-Primary Health Care, essential health care based on the practical, scientifically sound and socially acceptable methods and technology made universally accessible to individual and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self reliance and self-determination.

Health- A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Immunization- The protection of susceptible persons from communicable disease by administration of living modified agents (e.g. yellow fever vaccine), a suspension of killed organism (e.g. whooping cough vaccine) or an inactivated toxin (e.g. tetanustoxiod vaccine).

Communicable Diseases- An infection or illness which arises through transmission of an infectious agent or its product from an infected person, animal or inanimate reservoir to a susceptible host, e.g. malaria, dysentery, leprosy, cerebrospinal meningitis, tuberculosis etc.

Impact of PHC- any activity of health care delivery system which provides a particular phenomenon for the people in a specific region or locality. Though impact could be negative, in the case of PHC system, it is mostly positive especially at the local government and community level.

Community Participation- Is a process by which efforts of the people themselves are united with those of the governmental authorities to improve the health, socio-economic and cultural conditions of the communities, to integrate them into the life of the nation and to enable them contribute to nation building.

Referral System- Is an integral part of PHC practice, and occur when a condition cannot be effectively managed at a level, the patient is referred higher up. The patient having been treated successfully at the higher level for continuity of care and follow up. This is also called two-way referral.

Household- Is a person or group of persons living together usually under the same roof or in the same building/compound, who share the same source of food and recognize themselves as a social unit with a head of household. Household may be regular or institutional.

CHO- Community Health Officer is a person equipped with the knowledge and skills for an effective community-based care delivery.

CHEW- Community Health Extension Worker, is a medical personal who plans, deliver and manage PHC services at the community level.

TBAs- Traditional Birth Attendants, are Community- based workers living in the community, trained on how to counsel women appropriately on family planning, immunization, nutrition, infant feeding and taking deliveries where no health facility is within easy reach.

Health Care Facilities- the personal, public and private clinics, maternity homes, hospitals, hospital equipments, drugs, provided for effective health care delivery activities.

HIV- Human Immunodeficiency Virus, a retrovirus that damages the human immune system, which then permits opportunistic infections to causes eventually fatal diseases.

AIDS- Acquired Immune Deficiency Syndrome is characterized by unusual opportunistic diseases in otherwise healthy individuals resulting from a compromise immune system.

1.8 Methodology

In other to obtain the information required for the study, both primary and secondary sources of data were collected for analysis.

1.8.1 Sources of Date

1.8.1.1 Primary Data

One of the main research instruments is the questionnaire, which was administered in all the wards in the study area. A set of household questionnaire was designed to generate information on household characteristics. This was divided into two sections. Section A consisted of questions designed to obtain information from the sample population in the LGA on basic characteristics such as age, sex, marital status, educational attainment, age at marriage, and type of marital union, number of children, income and type of employment. Section B was on availability of primary health care services. This was to generate data from the respondents on the accessibility, availability and utilization of existing health care facilities in the study.

The questionnaire contained closed and open ended questions, which were aimed at getting the required information on PHC delivery system. Before the administration of the questionnaire, the ward heads were informed before hand, and purpose duly explained.

1.8.2 Sampling Design

The study area (Igabi LGA) has a total population of 430,229 with a male population of 219,269 while the female population amounts to 210,960 (National Population Commission, 2006). The whole wards in the LGA form the sampling frame for the study. After considering cost, available resources and an optimal sample size of obtaining reliable estimates on the study area, a 0.12percent sample was used as the sample frame (0.12percent of 430,229 amount to 516 respondents).

The purposive sampling method was used. This method is characterized by the use of personal judgment and a deliberate attempt to obtain representative sample by including presumable typical areas or groups in the sample (Abiola, 2007). A residential ward study areas was selected from the north, south and central part of the study area to reflect the differing age, ethnic, income, occupation, religion and educational characteristics. In the light of the above explanations, the twelve wards in the study area were covered.

1.8.3 Reconnaissance Survey

To gain adequate knowledge of the study are, a reconnaissance survey was undertaken. This serve as the first phase of the research, which involves an initial exploration on how PHC activities experience and understood in the study area. Questions in the prepared questionnaire were asked orally so as to know about questions that better suit the situation on the ground. The final questionnaires were prepared after corrections were carried out with information from the oral interviews and discussions.

1.8.4 Questionnaire Administration

A total of 516 questionnaires were taken to the field for administration, and out of this number a total of 435 (84.3 percent) respectively were successfully administered. In

most cases, questionnaires were administered in direct face to face interaction or interview by the researcher or the field assistants. The questionnaire was in English but interviewers were however conversant with appropriate ways to ask questions in relevant Nigerian languages spoken in the area or in the languages best understood by the respondents. Respondents who could read and write were allowed to fill the questionnaire themselves, but on submission clarification on any aspect not understood were made.

As part of this study, questionnaires were administered to the LGA staff of the health department, clinics, dispensaries, primary health care centres, comprehensive health care centres (CHC), general hospital armed forces hospital in the study area. This was to ascertain whether PHC delivery system was having a noticeable impact on the well being of the people in the area.

1.8.5 Focus Group Discussions (FGDs)

In this study, FGDs was conducted. This was a participatory method which involves bringing out 6 to twelve people to explore issues related to PHC delivery system. The respondents focus upon include community health workers/officers (CHO). Traditional Birth Attendants (TBAs) and market women. The aim of each discussion ws to encourage people to exchange ideas and opinions as they explore a specific issue. The discussions were flexible in order to accommodate unexpected issues that may come up. Also, FGDs provided information that will be helpful in producing policy instruments that will bring about improved health care delivery system in the LGA and in Nigeria.

1.8.6 In-depth Interview

In-depth interviews with community leaders, women leaders, non-governmental organizations (NGOs) and market women was used to gather information concerning the

activities of PHC in the study area. The interviewer used prepared questions to gather information from this people or gather information from this people or group interview (see appendix B).

1.8.7 Secondary Sources

As part of the secondary data, existing official and unofficial statistics from both national and international publications, including articles, journals, books, conference papers, thesis and dissertations were used. Some of the publications from WHO/UNICEF were also used as guides. Data from federal and state ministries of health/planning and the national bureau of statistics (NBS) were required for background information on distribution of health care facilities. Data were also obtained from the National Population Commission (NPC) publications analytical report, and other commissioned papers.

In addition, records and documents from Igabi LGA health and revenue departments, general hospitals, PHC centres, dispensaries and clinics were also gathered. Data from this secondary source were useful in carrying out comparative analysis of the impact of PHC delivery system.

Downloaded online articles and reports of conferences of national and international agencies from several web sites were used. Some of these information provided answers to several questions in this research.

1.8.8 Method of Data Analysis

The 435 valid questionnaires used for this research were coded into a computer and analysed using the software Epi-info version 9 of SPSS/PCT software. This was the first step in the data analysis.

1.8.8.1 Descriptive Analysis

Both descriptive and inferential statistics were used in the analysis. This allowed for the description of variables through frequency distribution and presentation of results in percentages, bar charts, tables and pie charts. Descriptive analysis was less expensive and had far less ethical difficulties because information is also available in the form of hospital records that are not vary complex in terms of content.

1.8.8.2 Statistical Analysis

A study of PHC may necessarily require hard core statistical method of analysis. However, the rank correlation test is used together with some other statistical methods common to geographers.

The rank correlation test, which is a non-parametric technique of hypothesis testing was widely used in the study. The rank correlation test is particularly suited to data in behavioral or social sciences were a researcher may be interested in a number of subject responses or objects, which fall in various categories rank correlation. The rank correlation may be used to test if a significant difference exists between an observed number of responses in each category and the expected number which is based on the null hypothesis (Ho).

In rank correlation, the data may be ranked in other of size and importance using the numbers 1, 2, 3…… N. If we rank two variables in such a manner, the coefficient of rank correlation given by spearman is:

$$r \text{ rank} = 1 - 6\frac{\varepsilon D^2}{N(N^2 - 1)}$$ where;

D= Differences between ranks of corresponding values

N= Number of pairs of values in the data

The rule regarding the rank correlation test is that when the critical values at 0.05 level of significance is less than the calculated value, the null hypothesis rejected, and when it is the reverse; the null hypothesis is accepted. This implies that when an investigation is aimed at establishing an assertion with strong support from the data, the negation of that assertion is regarded as the null hypothesis (Ho) and the assertion itself is taken as the alternative hypothesis (Hi).

To carry out rank correlation test, data they were analyse by computing the information obtained from the study area. This is to minimize to a large extent values that could come under 5 since in carrying out the rank correlation test, values that fall below 5 are not appropriate.

1.9 Organization of the Thesis

This thesis is made up of seven chapters in all and the chapters are carefully arranged to enable each chapter properly ties to the next.

Chapter one is the background of the problem and highlights the need for the study. The discussion in this chapter includes the listing of the main aim and objective and hypothesis of the study. The chapter also gives some explanatory notes on some terms. The chapter also deals with the methodology that is used in this study; highlighting he types and sources of data analysis.

Chapter two reviews some of the relevant literature. The literature is reviewed in such a way that only the findings of the studies and method used are mentioned.

Chapter three focuses on the study area and properly discussed the location, physical setting, historical developments and population growth of Igabi LGA.

Also in this chapter the economy, social organization and health care facilities of the study area are discussed.

Chapter four focuses on the respondents and discusses the demographic and socio-economic characteristics of respondents. Variables considered are age, sex, marital status, type of union, religious affiliation, place of origin, and level of education, occupation, income, household size and type of accommodation. These Socio-economic and demographic characteristic to a large extent determine the utilization of certain services and the acceptance and non-acceptance of some policies and programmes.

Chapter five marks the beginning of the main analysis and looks at the health care services and utilization. This chapter also looks at the contributions of the community to PHC activities, impact of PHC system to the development of the study area. For the purpose of testing one the hypothesis for the study area, the rank correlation statistical test for significant differences in relationship is applied.

Chapter six looks at the availability of the health care services in the study area. The chapter focuses on the daily treatment of patients, type of illness treated, referral services, availability of personnel, sources of funding, logistic services and contributions of the community to PHC delivery system in the area.

Chapter seven essentially concludes the research and based on findings, highlights some needful. It draws attention for future research.

CHAPTER TWO
CONCEPTUAL FRAMEWOK AND LITERAURE REVIEW

2.1 Introduction

Although impact could be negative, in the case of PHC, it is mostly positive. In an attempt to look at the available literature on the impact of PHC delivery system, attention will be focused on the concept of health as well as the concept of PHC. Also, impact of PHC on maternal health services, immunization, family planning, growth monitoring, infrastructural development, and general well being of the people and disease reduction will be discussed.

2.2 Concept of Health

Some definitions of good health stress the lack of active disease process and as a process of adaptation to social environment (Illich, 1975). Others emphasized self-actualization, the fulfillment of the individual with normal body functions and the concept of high level wellness (Mahler, 1986). The true healthy person is considered being alive and active, exudes energy and enjoys being himself and with others. WHO(1978) has given a comprehensive definition of health which include three important dimensions, such as physical and mental health, and social wellbeing not merely the absence of disease or infirmity. Physically, the body structure and functions to laid down standard within the range of normal development and functions of all the systems. Mentally, the individual realizes his own ability could cope with normal stresses of life, work productively and fruitfully and is able to make contributions to his own community. Social wellbeing implies the individual ability to adjust with his social life, at home, at work place and with people around him. Thus, Datong (1988) emphasized that health does not only mean the fitness of the body but also the soundness of mind and emotion which makes life worth living.

From these definitions, health should be seen not as an isolated issue but as an integral whole of the conditions for promoting better living standards of the people. Consequently, health care services are explained from the following perspectives: Firstly, it defines health within the context of such basic pre-requisites such as peace, security, shelter, education, food, stable ecosystem, sustainable resources and social justice and equity (Alakija, 2004). Secondly, it explains that community health improvements do not necessary have to start with direct health related activities but income generating projects, good and effective housing programmes, formal and non-formal education (Massoud, 2007). Thirdly, health related matters should be people oriented rather than focus on gigantic project which do not have direct bearing on the people (Massoud, 2007). This implies that people are to play a key role in defining and maintaining health and development objectives.

From these perspectives, health is a fundamental human right of the individual, family and community, and it is to be achieved through PHC approach, in a spirit of social justice and as part of overall development. This is to be based on self determination and self-reliance. The concept of health as a fundamental human right is the central theme of this study, which has the ultimate aim of providing effective health care services to the people.

2.3 Concept **of Primary Health Care (PHC)**

Most writers have described the principles of PHC in genetic terms, while others have focused on practical organizational issues, and particularly district health care services (King, 1966). PHC aims at responding to peoples health needs and demands, to safeguard, promote and restore health. It has been described as a condition for human development (Passmore, 1979). PHC therefore include maintenance and restoration of health, preventing further deterioration, relieving symptoms particularly pains, offering assistance in coping

with the inevitable and providing reassurance through authoritative interpretation (Passmore, 1979).

The objectives of PHC therefore include cure, care and autonomy (King, 1966), and the system is based on optimal balance between being effective, integrated, continuous and holistic (King, 1966). Effectiveness of care means that there is a balance with its cost and with the importance of holistic care. Continuous care also implies care till the end of the episode of disease or risk, while holistic health care takes into account the physical, psychological and social dimension of health and wellbeing (Criel, 1995). Each of these characteristics is thus important, but none is absolute over the others. This means that services offered are variable according to circumstances and resources.

According to Surungbe (1990), PHC include the following concepts: The first is universal coverage of the population, with care provided according to need. Secondly, services of PHC are promotive, preventive, curative and rehabilitative. Thirdly, PHC services are effective, culturally acceptable, affordable and manageable. The fourth is that communities are actively involved in the development of services so as to promote self-reliance. The fifth is that the approach in the system is linked with other sectors of development.

From this perspective therefore, PHC is not medical care. It means total care for individual, families and communities. It implies management of disease caused by cultural, social and environmental factors (Datong, 1988). PHC is oriented to achieve a specific goal, such as health for all by the year 2000 and beyond. It also include the focal and the entry point to the health care system at the grass root because it gives particular attention to the point of initial contact between the people and health care system particularly health

promotion, education and care of common problems (Surungbe, 1990; Alakija, 2004; Obionu, 2007). PHC therefore is a formally established health care system meant to provide the society with all the health care services required, other than those which can only be provided by a hospital.

2.4 Impact on Maternal Health

The aim of maternal health services is to reduce to a minimum the risk of pregnancy and childbirth, as well as reduce maternal mortality and morbidity. (Obionu, 2007). Since 1945, World Health Organization (WHO) emphasized the need for the international community to protect the world from the ravage of diseases. This led to the initiation and expansion for national application, the village based women in health development and female functional literacy programme in other to promote health care, especially maternal health care services at the grass root level (Bisallah, 2002).

Research on the impact of PHC have shown that about 99 percent of women deliveries in developed countries of the world are received by a trained attendant and 53 percent in developing countries as a result of PHC activities (Yadua, and Singh, 2002). This figures are higher in Latin America and the Carribean countries with a proportion of 85 percent and 35 percent respectively (Yadua, and Singh, 2002). Though poor rural woman in sub-saharan Africa and South-east Asia receive the least maternal services, the proportion has increased from 19percent before the introduction of PHC to about 39 percent since Alma Ata declaration in 1978 (WHO, 2006). Also, neo-natal tetanus coverage of pregnant women with two (2) or more doses of Tetanus Toxoid (TT) has also increased by 20 percent in these countries (WHO,2006).

An evaluation of PHC implementation in 52 model LGAs in Nigeria in 1986 showed that about 20percent of all deliveries were attended by a trained health worker or traditional birth attendant (TBA) (FMOH, 2006). In 1993, this proportion rose to about 34 percent (FMOH, ibid). In a study carried out by Bisallah (2002) in Rafi LGA of Niger State, 33 percent of the deliveries were attended by Skilled workers as against the national target of 70 percent (Bisallah, ibid). The reasons given for the low coverage was attributed to shortage of trained personal and lack of decision making power of women. Again, a similar study was carried out by Iliyasu (2002) in Shika LGA of Bauchi state, it was found that utilization of maternal services by pregnant women in the PHC facilities was found to be about 11percent and the probable reasons for low utilization were religious, cultural and shortage of health care workers.

2.5 Impact on Immunization

Immunization is an obvious crucial component of PHC system. As a preventive method, it remains the single most feasible and cost effective way of ensuring that both children and adults enjoy the right to survival and good health. With success in global eradication of small pox in the 1970s, through a comprehensive campaign of world wide immunization, coupled with the fact that an estimated five (5) million were disabled by the six childhood preventable diseases, the WHO established the expanded programme on immunization (EPI) in 1994 (Bisallah, 2002).

Since the EPI launching, over sixty (60) countries have adopted the programme and others are being constantly added to the list, and they include Africa, America, Asian and Middle east countries, all of whom are laying emphasis on the programmes as a building block for PHC delivery system (Obionu, 2007).

According to FMOH (2006), the impact of PHC on immunization is ernomous. It revealed that the proportion of children fully immunized globally in the first year of life for Bacilla Calmette Guerin (BCG), Diptheria, Pertusis, Tetanus(DPT), Polio and Measles were 85 percent, 79 percent, 80 percent and 75 percent in that order. It further revealed that the proportion for Africa is 67 percent BCG, 52 percent DPT, 56percent Polio and 50 percent measles. The western pacific had the highest proportion with 92 percent, 79 percent, 80 percent and 78percent for BCG, DPT, Polio and Measles respectively (Bisallah, 2002). A study was carried out by WHO (2005) to assess the impact of PHC system in Bimari State India, about 48 percent of all the children received all the vaccines, and this accounts for about 70 percent target in that year.

In 1995, the national coverage in Nigeria for Tetanus Toxoid (TT) vaccination was 27 percent, and in 1997, a study was carried out in Barikin Ladi LGA of Plateau State, it was found that the LGA had a coverage of TT Immunization of 63percent with at least two (2) doses of TT Vaccine (Katung, 1997)

Statistical record also reveals that at least 800,000 infants are now being saved each year in developing countries, including Nigeria as a result PHC activity (Bisallah, 2002). In malawi for example, at one year of age, 99 percent of the infants are fully immunized against tuberculosis, 91percent against polio, 90 percent against DPT and 64percent against measles (Bisallah, 2002).

A similar report on the state of health of children world wide in the year 2000 gave the national coverage of Nigeria as 29 percent (Bellamy, 2001). The high coverage obtained in Barkin Ladi was attributed to the fact that the LGA has been receiving both logistic and financial support for the implementation of PHC activities since 1986, being a pioneer PHC

LGA in the country. Also, in another study carried out in 1991 by Ekanem (1993), in Idomy a rural setting in cross-river state, of 470 children sampled 39 percent had full immunization, 46 percent received only part and 15 percent had no immunization. The coverage for BCG was 83 percent but declined progressively with other vaccines and was least for measles with 33 percentage.

On the whole, Bellamy (2001) revealed that after the re-launching of EPI in 1986 to eradicate poliomyelitis, the proportion of children up to one year of age fully immunized with different vaccines in Nigeria were BCG 27 percent, Polio 22percent, DPT 21percent and measles 26percent while 29percent of pregnant women were fully immunized with at least two(2) doses of Tetanus Toxoid(TT).

2.6 Impact on Family Planning

Family planning became a matter of concern at Alma-Ata conference, in view of the fact that fatal deaths rates tend to increase with birth order especially in developing countries were child spacing is lacking. The conference also identify the survival, health and development of children as well as the survival, health and reproductive potential of child bearing women very crucial in PHC development (WHO, 1978).

The impact of PHC on family planning became obvious when we consider the reports of WHO/UNICEF (2006). It shows that for mothers/couples who receive family planning services, illness detected is treated during the process of receiving family planning and this has reduced the likelihood of long term delibiliting problems; detect high risk pregnancies and referral are made for special assistance.

In Chile, Fisher (1983) reveal that the prevention of abortions through effective use of contraceptives has dramatically reduced the number of maternal deaths attributable to

abortions as well as the proportions of all obstetric hospitalization that are due to abortions. In a similar study, Warrem (1987) found that in the United States alone, it has been estimated that over half a million hospitalization for conditions ranging from beningh breast disease to cancer of the reproductive tract are averted each year through the use of oral contraceptive. Diseases such as ovarian cyst, pelvic inflammatory, iron deficiency anaemia, ectopic preganancy and ovarian cancer may also be averted (Suleiman, 2000).

In a research conducted by Joshi and Schultz (2007), who used the 1996 Matlab Health and Socio-economic survey and census data collected in 1974, 1978 and 1982 to examine the effects of long-term investment in the Matlab, Bangladesh, family planning, Maternal and Child Health (FPMCH). Their findings shows that families in communities where the FPMCH program was implemented become wealthier and healthier than families who lived in other communities that were similar when the Matlab program begun. This study agrees with Gribble and Voss (2009) in their study on family planning and economic well-being in Bangladesh. It was found that family planning programs, brought about by PHC activities has improved economic security for families, households and communities through large incomes, greater accumulation of wealth and high levels of education.

Suleiman (2000) stated that due to family planning, awareness in family size reduction has become a reality by most couples in both developed and developing countries. Demographic and Health Survey (DHS) data show the mean number of desired children decline each year between 1970s and 1990s (Suleiman, 2000). A similar study conducted by Shah (1998) reveal that fertility desires varied across geographical regions, and for sub-saharan Africa the average ideal number of children was 5.8. In Asian and Latin American Countries, the ideal number of children was 2.5 and 4.0 respectively. Women interviewed in

Sudan in 1989-1990 by DHS considered 5.9 children as ideal and in Jordan and Egypt, it was 4.4 and 2.8 children respectively (Suleiman, 2000).

According to WHO/UNICEF (2006) the impact of PHC on family planning in developing countries are many. The first is that couples now have relaxed sexual relations and are confident that intercourse will not lead to unwanted pregnancy. Secondly, most couples have been able to postpone their first child or subsequent children to complete their education or vocational training. This freedom has made significant difference in economic future of the entire family due to employment opportunities. Thirdly, couples have been able to provide positive examples to their children interms of spacing and can now explain to them what family planning meant, and lastly, children themselves have been able to plan their own reproductive lives and can share the problems associated with unwanted adolescent pregnancy.

In a study on child spacing among rural Yoruba women in Ekiti and Ibadan, Orubuloye (1981) noted that family planning has improved the likelihood of survival and good physical and emotional health for many families at all stages of life. This study agrees with WHO/UNICEF (2006) who reported that the risk associated with fatal death, birth defects, infant and child mortality and nutritional depletion for women and children have been reduced drastically, as a result of family planning in developing countries.

On the whole, Jeneffer (2001) stated due to family planning, family size has fallen from 5.5 percent on average in 1970 to about 3.0 percent today, and the high risk birth to girls aged 15-19 years has fallen and that family planning contraceptive use among women has increased steadily rising from 14 percent of married women of reproductive age in 1905 to more than 50 percent today as a result of PHC activities.

2.7 Impact on Growth Monitoring

Growth monitoring have been used in the assessment of the impact of PHC delivery system. Child's nutrition can be measured by monitoring the child's growth properly and a child that is well fed will grow properly and reach the right weight for age. For example, a childhood mortality study in America showed that no less than 57 percent of children who died before the age of five years were found to have malnutrition as associated cause of deaths, while in 1995, more than 28 percent of the world's children under five years were under weight for their age (Park, 2000). As a result of the high toll of death's in under five years due to malnutrition, mass growth monitoring is now being practiced by several countries of the world.

In Indonesia and Thailand WHO/UNICEF (2006) reported that about 50 percent of the children under five years of age are being weighed regularly as a result of PHC services provided to the rural communities. Also in Pahou, a rural setting in Bendel State, Varkessier *et al* (1986) carried out a study on the assessment of utilization of available PHC services especially growth monitoring. Out of 82 children aged between 12 to 17 months in one of the villages showed that 43 percent of children had attended at least three weighting sessions in six months at maternal and child health clinics. Studies have also shown that about 25percent of children seen in the clinics are brought back for weighing more than once especially for children between the ages of nine months and above (Kuti *et al*, 1991; Bisallah, 2002).

A study carried out by Iliyasu (2002), on the factors affecting utilization of PHC services in Shira L.G.A of Bauchi state, Nigeria found that growth monitoring services in the L.G.A health services are 12.5percent of the total household sampled allow their

children to be taken for growth monitoring services, while 17.5 percent occasionally take their children. In a similar study by Bisallah (2002), in three selected villages in Rafi L.G.A of Niger state, Nigeria on the PHC implementation, growth monitoring services provided by PHC centres is practiced in only one village. In this village 96.9 percent had weighting within the age of 0-11 months, 3.1percent were within the age of 12-35months. The probable reasons for non utilization of growth monitoring services in the other villages was lack of motivation of mothers to bring their children, inadequate training of staff on the importance of weighing and lack of weighing scales at the PHC centres, as well as long distances covered by women to PHC facilities. He author concluded that PHC has impacted these communities because children are weighed, their height and other measurements taken, and the values obtained are compared with standards in other to assess the children's nutritional status.

2.8 Impact on Infrastructural Development

Infrastructural developments are the basic systems and services that are necessary for the provision of heath services, and they include transportation, water supply, electricity, communications and housing. One of the most important aspect of PHC activities is the provision basic infrastructures particularly in the rural areas and urban slums, where most of the PHC centers are located. Over the years these facilities has been are refined and improved not only on the basis of production but also of information gathering at all levels of government.

In a study conducted by Adaora (2005) on the impact of PHC on rural development observed that the introduction of PHC system has lead to the construction of roads, culverts, bridges and good drainage system to facilitate the control of flood, erosion, faecal and water

borne disease such as Malaria, onchacerciasis, trypanosomiasis and schistosomiais. The controls of these diseases have positive impact on the development of rural areas in Nigeria.

In a similar study in Jabaa L.G.A. of Kaduna state, Shunom (2006) found that out of 115 respondents, 11 percent agreed that PHC system has significantly impacted the area through the construction of good roads, while 24 percent were of the opinion that the system has impacted their communities through the provision of basic infrastructures such as electricity and portable drinking water.

Distance and poor transportation separating the potential patients from the nearest health facility has been shown to be an important barrier to seeking for health care particularly in the rural areas (Stocks, 1985). In a study conducted by Airey (1989) in Maru District, Kenya found that the provision of health care system which has lead to the improvement of roads construction in the area has reduced the travel time and distance to health care facilities, and this in turn brought down the cost of hospital bills for patients. Similarly, Cardoso (1985) discovered that in Cuba, the provision of maternal services in the rural areas brought about the provision of basic infrastructures such as good roads, rural electrification and pipe borne water.

A survey conducted by National Bureau of Statistics (NBS) (2006), found that the distribution of health care infrastructures has been on the increase since the inception of PHC delivery system in Nigeria. It reveal that between 1999 and 2001, the estimates of public health care facilities with a population of 140 million people shows that there are 13,703 PHC centres, 855 secondary and 59 tertiary facilities in the country, given a ratio of 5,500, 135000 and 2.1 million per facility in that order. Similarly, according to the FMOH (2009), because of the increased number of health care facilities, about 78 percent of

household are within 5 kilometers of PHC facilities, in the rural areas while in the urban areas the proportion is 80 percent. Furthermore, about 60 percent of households live within a pharmacy or patient medicine vendor (NBS, 2006).

The impact of PHC on infrastructural development is obvious as observed by Alakija (2004) and Obionu (2007) both stated that spatial structures such as the construction of good roads to facilitate the services of PHC activities link many towns and cities. These roads are efficiently utilized by the people for transportation of goods and services especially agricultural produce. Katung (1997) in a similar study observed that the introduction of PHC systems to provide health for all has impacted many communities not only on medical services but also through the provision of basic infrastructures such as housing, potable water, electricity and recreational services.

Kuti *et al* (1991) stated that government over the years in developing countries has provided some basic infrastructures to facilitate the activities of PHC system. This has strengthened the participation of women in food production and ensures household food security in their homes, raises their self-esteem and empowers them to serve their communities.

2.9 Impact on General Wellbeing of the People

PHC is a philosophy pointing to an approach based on the understanding that the individual has the fundamental right and responsibility to take part in matters regarding his own wellbeing.

Considering the ecology of poverty and disease, Merier (1976) stated that the improvement of health status of the population as a result of the improvement in the provision of health care facilities constitutes an important precursor of poverty and diseases.

Similarly, N'Guessan (2001) in a study on Ivorian rural areas found that the improvement of health status of the rural population has influenced the supply and productivity of labour as such, the health care system is a form of both economic development and human capital indicator. PHC therefore is a driving force between social policy and productivity of the poor in the rural areas because it has empowered them.

In line with this Adaora (2005) found that 60 percent of the sampled population in Shika, Zaria agreed that PHC has contributed to the general wellbeing of the people by increasing their living standards. This study agrees with Shunom (2006) who stated that about 50 percent of the respondents in Jaba LGA of Kaduna state agreed that PHC system has impacted their area by raising their standard of living, while 10 percent said that the system has created awareness on the importance of family planning, child welfare, proper nutrition and hygiene.

Dadong (1988) Observed that the provision of health care delivery system has improved the general standard of living of most people in the Sub-Saharan Africa by reducing the working days usually lost to illness, improved productivity due to improvement in the health of the labour force, saving of time previously spent in traveling and waiting for treatment thus yielding more available time for production, and a decrease in mortality rate resulting in increased longevity of the labour force. Again, in a study conducted by WHO/UNICEF(2006) found that countries in the Sub-Saharan Africa and Asia made a major investment not only in human resources development in PHC but at the level of managers and elected officers through capacity building, and this has increased the general wellbeing of the majority of the people.

Bisallah (2002) and Alakija (2004) stated that the impact of PHC on the general wellbeing of the people in Nigeria is quite enormous because immunization and vaccination centres are more accessible to people, more sanitary facilities are provided, food taboos dispelled and people are motivated to back preventive medicines. In effect, diseases such as malaria, cholera, dysentery, measles, tuberculosis and meningitis has been reduced and this has increased life expectancy, thus placing the nation to a sound economic footing. Similarly, Kuti *et a*l (1991) and Obionu (2007) both agreed that educational services provided by PHC activities has not only raised the level of awareness of people on the need for health for all but have also phased out some traditional beliefs and ways of life such as child abuse and beliefs on the spread of diseases like measles, poliomyelitis to be a must for every child to undergo at his basic stage of life. This attitude change helps the people especially the rural areas to embrace development projects and accept innovations. Reduction in mortality has not only add years to income generating lives and reduce dependency ratios, but increase the 'yielded' on education and other investment (Datong, 1988)

2.10 Impact on Disease Reduction

Regarding the reduction of diseases (Surungbe, 1991: and Obionu, 2007) stated that over the years, PHC services offer community services that are promotive in that they promote healthy living conditions; services that are preventive in that they prevent diseases in the population through immunization, better sanitation, better feeding practices and early diagnosis of diseases.

Similarly, Ishaq (1994) in a study in Zaria Kaduna State, Nigeria noted that between 1990 and 1993 about 48,223 pregnant women reported for ante-natal care in different clinics

and all of them were examined to determine the condition of their pregnancies and useful advices was given to them, and this has helped in reducing maternal morbidity in the area.

According to Partnership for Transforming Health System (2008), since the inception of PHC system minimum essential public health interventions has been adopted by many countries in other to reduce morbidity and death. These include information dissemination on hygienic practices, immunization, school based health services, check the spread of HIV/AIDS by promoting change in sexual behaviour, distribution of condoms and treatment of STDs/STIs. And this has reduced incidence of diseases and increased life expectancy especially in developing countries.

In Nigeria FMOH (2009) noted that indoor residual spraying (IRS) at 85 percent coverage of target risk populations remains the most effective intervention that reduces malaria transmission rapidly. In 2006 and 2007, the national malaria control programme conducted small scale pilot IRS project in six LGAs located in the forest, sudan and sahel regions. The result showed that about 20 percent of malaria cases were reduced in those areas.

Similarly, a study carried out by FMOH (2009) shows that the approach to diagnosed and treat malaria through the provision of ante-malaria combination therapy has lead to; reduction in the number of cases progressing to severe malaria by 30 percent; preventing or at least delaying development of parasite straints resistant against used anti-malarial combinations and contribute to reducing the reservoir of parasite stages transmissible by mosquito vector.

According to Shunom (2006), the provision of PHC services in Nigeria has reduced the incidence of diseases by providing relieve from fear , pains and suffering. This implies

that when people get sick they tend to seek relieve or help. PHC services stand a better position to provide solutions to the needs of the people since medical relieve is their priority. By reducing maternal morbidity and disability in the society PHC perform the function of diagnosis and treatment of the sick or injured persons. Consequently, the systems ensure better health conditions for the society and promote fitness of the body and emotional wholesomeness and soundness of mind (Adoara, 2005).

Research have shown that the introduction of family planning saves lives and improved maternal and child health. In Bangladesh, Gribble and Voss (2009) observed that the provision of family planning, maternal and child health program reduced child mortality by 20 percent and women who practice family planning had higher average body mass index because they had more income to purchase food. The body mass index places women above a threshold where the risk of dying may be reduced by as much as 20 percent. In addition, because women in the family planning area had fewer pregnancies and births, they also had a lower risk of pregnancy-related death and disability.

2.11 Conclusion

It is commendable to note that the health status of individuals, families and communities has been improved as a result of PHC activities since Alma-Ata declaration. The challenge at both national and local level is to increase the coverage of the system. High priority should be given to filed-based research in order to a appreciate its broader development issues and strategies. Programs to further reduce morbidity are more likely to succeed if they are based on data gathering and devising interventions that will address them.

CHAPTER THREE
BACKGROUND OF THE STUDY AREA

3.1 Location

Igabi LGA stretches from Dumbi, about 45 kilometres north of Kaduna, the state capital, covering Gadan Gaya which is about 60 kilometres along Jos road, north east of Kaduna town, down to Kudanda in Rigasa ward. The LGA is to the north by Giwa and Zaria Local Government Areas (LGAs), to the east by Soba, to the west by Chikun and to the south by Kaduna LGAs.

Igabi LGA is one of the twenty three LGAs of the state with Turunku as the headquarters. It is located within the guinea savanna belt on latitude 30^0 30' north and 11^0 1' north and longitude 7^0 1 and $8^0$1 east of prime meridian. (See Figure 3.1)

3.2 Geology and Geomorphology

With its location on the high plains of Hausalands, the surface rocks and hills composed of the pre-cambrian basement complex. The volcanic rocks of the area consist of basalt flows and cones made up of meta-sediments and older granite and undifferentiated igneous and metamorphic rocks (Akintola, 1982). These rocks are neither porous nor permeable, except where they are deeply weathered or have zones of weakness such as cleavages, Jeenits, fissures and shelter belts.

Geomorphologically, the LGA has long been subjected to physical and chemical weathering under tropical conditions and has produced a characteristic topographic of peneplain, inselbergs and dunes of resistant basement rocks. A combination of topography and geology of the area more or less control the groundwater occurrence.

3.3 Relief and Drainage

The plains on which Zaria, including Igabi LGAs lies are part of the vast gentle undulating plains scenery which extend almost unbroken from Sokoto to Lake Chad and beyond, and from south of Kaduna to Tigneddi scrap near Agades. Such plains are characteristic of Africa as a whole (Mortimore, 1970).

The study area is surrounded by hill features of two kinds such as; rock inselbregs and Lateritic ironstone-capped mesas. These inselbergs vary considerably in dimension and shape. The mesas are usually partly hidden by woody bush and less easily seen.

Residual granite inselbregs, the largest of which is found in Dumbi, Farakwai, Zangon Aya and Amana provide the relief. The shape of these inselbregs also varies but a common feature is the convex or dome shaped which can be almost perfectly symmetrical or hardly apparently within a pile of rectangular joint blocks. Further, these rocks are made up of more than one domicile unit (Mortimore, 1970).

Also, tabular hills of 45-150 metres in height can be seen around Turunku and Igabi areas. These hills rise as gentle slopes of the surrounding plain and steepening to a cliff of 3-18 metres in height, which coincide with the hard layer of lateritic ironstone which caps these hills. These inselbergs are generally few, inconspicuous and located on interfluves.

The main rivers draining the study area are the Kaduna, Rigasa and Kogin to the south, Galma to the east and Tubo and Chidamaki to the west, while Kangimi River occupy the central area and moving towards the north. These rivers flow mostly during the rainy season and water may occur in discontinuous pools with large parts totally dry on the surface in the dry season.

There are two types of drainage basin in the study area in terms of stream frequencies and drainage densities. Such basins are characterized by intense water erosion and gullying. Rivers Rigasa and Tubo are good examples. The second types consist of the basins with lowstream frequencies and drainage densities. The chidawaki, Kogin, Kangimi and Rigachikun rivers contains wide marshy flood plains often with intricately developed meanders. However, the drainage pattern is mostly dentritic, especially in deeply weathered areas, implying that the water courses are not structurally controlled though River Galma follow some structural trends in a number of places.

3.4 Climate

The climate in the study area is tropical continental but has been modified by the relief.

a. **Rainfall**: One sticking feature of the rainfall pattern in the study area is that it rises gradually from the month of March and reaches its highest peak in September and starts to decline into the dry season in the month of October. The beginning of the rainy season in the area is accompanied by dry spelt. Annual rainfall ranges from a minimum of 128 mm in the north to about 438mm in the southern parts of the area (Min. of Eco. Planning, 2008) for the same period.

   The seasonality which characterized the rainfall patterns, duration and regimes of the wet season and the number of months without rainfall determine the type of crops, planning of farm operation, food and animal production, and assessment of drought and erosion hazards on different parts of LGAs. Also, the availability and duration of water in the rivers, streams, boreholes and wells is affected by the rainfall regime.

b. **Temperature**: Generally, temperature varies between 20 degrees centigrade around the mouth of January an over 30 degree centigrade in April. Air temperature is high throughout the year with mean monthly temperature rising from January at 12 degrees centigrade and attains its highest peak at 35 degree centigrade (Barba,1982), when the harmattan no longer has a cooling effect at night. Although the haramattan keeps temperatures low at night, the sun is very hot during the day, as there is very little moisture and so few clouds. Minimum temperature rises from its lowest value in December to January to its highest value in July and August. The implication for health is that the distribution of vector and organism also varies with the temperature pattern in the study area as observed by Bash (1978).

c. **Wind System:** The surface winds, with local variations conform to the main currents of air masses. Throughout the year the prevailing winds are either North-East or South-west winds, which blow across the whole area from October to Mid-March. There are usually very dry, cold dusty winds which reduce visibility to near zero especially in December through January and early February. This system corresponds with the harmattan, the tropical continental air streams which blow from the Sahara across the country. Between April and September, the south westerlies blow over the area. These are worm, moist winds which bring along with it rains. Relief plays an important role to the type of rainfall-Orographic type is more frequent in areas around Farakwai, Zango Aya, Amana and Turunku, where there are escarpments that are facing the coming winds.

The wind system of the study area also coincides with the movement of the sun from the tropic of Capricorn and vice versa, thus bringing about the movement

of the tropical continental air streams (CT) and tropical maritime air streams (CM). These two air messes form a discontinuity in their boundary zones called Inter Tropical Discontinuity (ITD) (Hore, 1970).

The cool, equatorial easterlies which blows in the upper atmosphere over the inter-tropical front may undercuts either the CT or CM forcing the other up violently Iloeje (1977). When the dry continental air stream undercut, the result is a whirlwind which blows spirally upwards carrying papers, dry leaves and dust with it. We refer to this wind as a dust devil, and occur most regularly in February and March. The wind systems that carry dust may in turn form a short but effective time, carry along pathogenic bacteria and viruses that cause outbreaks of some airborne diseases at certain period of the year in the study area.

3.5 Soils and Vegetation.

The soils in the study area remain dry about six months within a hydrological year, especially between the months of November to April. Mortimore (1970) observed that the soils belong to the class of leached ferruginous tropical soil type typically on crystalline acid rocks and Lithosols in both the highlands and lowlands areas and that some of the soils near the inselbergs may be classified as weakly developed soils while the fadama soils are hydromorphic in nature with very poor drainage.

Most of the soils contain 30-40 percent of clay at a reasonable depth, Mortimore (1970), and this allow for good moisture. The soils are inherently rather poor and cannot sustain intensive agriculture for long periods without the use of chemical fertilizers. Due to heavy rains, most of the soils form surface ‘caps’ and the surface so formed has a low

infiltration rate, giving rise to rapid run-off and create erosion and flood danger during the rainy season.

The vegetation in the area is characterized by shrubs and orchard bush, an indication of digression of the natural vegetation by human activities. Parka Biglobosa (Dorowa), Isoberlina (Doka), Delivahe (Durumi) and Ziziphous Mauritania (Marya), are some of the trees in the area. Others include; shea butter (Kadenya), Indiga magnifera (mango) date palms, silk cotton tree (Rimi) and Baobab (Kuka).

Along the river systems, there is often fringing forest trees and well developed undergrowth. The grass cover consists of 1.5 metre tall tussock grasses (Hore, 1970).

The non-natural vegetation deliberately established by man both within the settlements and the environs can be seen. These include forest reserves along Mararaba Jos/Pambegua road, planting of trees to serve as wind breaks and the deliberate planting of grasses and other forms of flowers in private homes.

The general appearance of the vegetation on uncultivated Lands, and the comparism with forest reserves, suggest that throughout the area the vegetation is adversely affected by human activities, namely bush burning, uncontrolled grazing, extraction of the vegetal resources for fuel use, medicine and building materials.

The presence of these vegetation has implications on the process of photosynthesis because plants release oxygen (02) which are essential to animals including man and these animals inturn release carbondioxide ($C0_2$) to plants.

3.6 Historical Growth of Igabi LGA

Igabi LGA was created out of Zaria LGA in 1989. At present, it has 14 districts which include Afaka, Farakwai, Gwada, Gwaraji, Igabi, Jaji, Kwarau, Kerawe, Rigachikun, Rigasa, Panshanu, Sabon Birni, Turunku and Zangon-Aya.

It is not known precisely when the Hausa speaking people first settle in this area but we may surmise that their coming was originally associated with the desiccation of the northern lands which drove them to their earlier home in the central Sahara, and that they have lived in Zazzau far more than a millennium (Mortimore, 1971).

The earliest communities of 'Hausawas' in this area were probably family groups clustered in hamlets for the purpose of communal and shifting cultivation. These communities were independent and separated from each other by uncultivated Lands, and political authority was vested on family heads, while in some places large settlements eventually grew up in the form of towns. These settlements developed large scale fortifications encircling the biggest inselbregs, serving as a defensive value, an important factor in settlement geography.

The name Igabi was christened after 'Gabi' who founded the village about 800 years ago (Gabi is 10 kms. away from Turunku, the headquarters of the LGA). Giving historical evidence from oral traditions; Turu had two female children – Zaria and Amina. These two children later became famous heros and legends of their lineage in history. Zaria town was named after 'Bakwa' Turu's first daughter. Queen Amina who was a warrior fought and established a kingdom at Turunku. Till date the historical seat of Amina is at the top hill legend at Turunku village in Igabi LGA.

3.7 Population

The creation of the LGA with the headquarters at Turunku has led to immigration of people from the remote areas to occupy the vast land. The study area has a diverse population, though the major tribes include the Hausa/Fulani and Gbagi people. Other ethnic groups are concentrated in the densely populated areas of Jaji, Rigasa, Barka-Lalu, Kudunda, Mando and Mararaba Jos. They include Yoruba, Igbo, Tives, Birom, Mangu, Atyap, Kagoro, Bajju, Ikulu ,Idoma, Jaba, Adara and Nizom.

According to the demographic census of 1991, Igabi LGA has a population of 308,239 with 158, 148 and 150,009 for male and female respectively (NPC, 1998) and in 2006, national population census, the population was 430,229 with 219,966 for male's population and 210,966 for female (NPC, 2009) representing 0.28 percent increase. While Jaji, Rigasa, Rigachikun, Mararaba Jos, Mando, Turunku, Igabi and Zangon- Aya has the highest population densities the rural areas and farmsteads are sparsely populated especially around Mangi, Kerawa, Panguza, Sheru, Gwada, Kargo areas Majidadi, Bina, Kerawa, Bargu Dumbi and Kampani.

The development of improved techniques and systems of cultivation and the appearance of increasingly stable form of government has been a driving force for population increase in the area. Also, the provision of modern and improved medical and social facilities in the area, improvement of transportation network, establishment of small scale and agro-allied industries tend to attract more population in the LGA.

Fertility rate is high due to early marriages of young boys and girls, and because polygamy is widely practiced, population is growing at alarming rate. Majority of the people are Muslims and Christians with few people practicing traditional religion.

3.8 Settlement Pattern

The settlement pattern in the study area reflects the physical environment as well as their history. In the past, they built wall cities like Kano and Katsina to protect themselves against the Fulani invaders who harassed them so much. Both the walls and roofs of their traditional city houses are made up of backed clay, which keeps the interior relatively cool. In the villages clay is used for the walls but thatched is used for the roofs since the inhabitants live is grassland region. Here, the settlements are either located at the bases of inselbregs for defensive purposes or are on the plains where they are fenced round with stones for the same reason.

Some villages in the area are split up into a number of small hamlets and gentle flat surfaces especially around Kerawa, Gwada, Mangi Sabon Birni, Bargi and Kargo at the western parts of the area. These settlements are socially homogenous with people who know themselves very well and share the same cultural background.

The area is also characterized by nucleated settlement type. These are groupings of several families, concentrated on definite locations, with each concentration separated from the other and surrounded by uninhabited land which is usually cultivated. Such settlements include Zango Aya, Panshanu, Gadan-Gaya, Igabi, Kanjimi and Amana.

The urban and semi-urban settlement types are the densely populated areas, also influenced by the socio-economic activities of the people. They are heterogeneous, with different cultural backgrounds and performing central place functions, that is specialized activities such as banking, administration, medical, military etc for the surrounding areas. These settlements include Mando, Mararaba Jos, Turunku, Rigachikun, Rigasa , Jaji and Igabi

3.9 Transport System

Villages are inter-linked with narrow paths. Communications between settlements are usually difficult because of difficult terrain. During the rainy season certain paths become impassible at certain points because of flooding.

The federal highways that pass through the local government include; Kaduna – Zaria; Katabu -Jos; and Kawo-Kaduna international airport roads. Local government tarred roads include Rigachikun-Sabon Birni Gwargoje ring road; Farakwai – Turunku and Turunku-Igbai-Zaria roads. All Laterite surfaced roads are done and maintain by both the local government and communities; and are spread all over the area.

Generally, the road density is quite below the United Nations standard; a minimum of 10km per $100km^2$ for developing countries including Nigeria (Hagget et al, 1977). Apart from the low road density, there is also low traffic flow along these roads, with the exception of Kaduna – Zaria express road, as a result, there is low volume of movement of goods and services in the area. The transport system in the study area is nothing to write home that will facilitate the accessibility of hospital and other health care services in the rural areas. This in essence suggests that some people in certain parts of the area have to travel several kilometers before getting health care services.

3.10 Social Organization

There is high degree of cultural linguistic and religious uniformity in the study area. The different patterns of social and economic organization relates rather to the contrast between rural and urban life than ethnic differentiation. The people are predominantly Muslems, and the Islamic faith has been a unifying force between the rulers and the ruled.

The Fulani and Hausa people emphasize agonistic kinship and domestic Life. Both practice monogamy and polygamy.

Despite this complexity in ethnicity and religion in the area, the people have resulted to work together which appears to form the basis of their social values. The implication here is that every culture is liable to carry forward beliefs and traditions regarding health, disease and causes of illness. For example, some cultural barriers prevent the inhabitants from recognizing health problems and seek for care. Also, cultural patterns also provide a wide range of favourable conditions that play a role in human diseases. For example, oil and fresh meat are forbidden to women during pregnancy period because it is believed to cause Jaundice in the baby (Ademola, 1981).

3.11 Agriculture

Agriculture is the primary activity of the people and the bulk of agricultural production in the area is undertaken by small-scale farmers most of whose labour force, and management and capital originates from the household. Only a small proportion of the land is devoted for cash crops production. Land preparation and weeding are carried out almost entirely by hand hoe, and harvesting is also done manually.

A wide range of crops grown include maize, guinea-corn, rice, millet, yams, beans, groundnuts etc. Tree crops also include mango, date palms, cashew, locus bean tree etc. Some are tendered in the farms while some grow wildly. Mixed farming is predominantly practiced, for sorghum is mixed with guinea corn, cowpeas, groundnuts, soya beans, and Okra. Application of chemical fertilizers to improve soil fertility is being practiced, but the implication is the pollution of water sources through run-off and infiltration.

Farmers do not normally keep cattle, but the nomadic and semi-nomadic Fulani pastoralists run after their heard through the entire area. Other livestock include goats, sheep, pigs dogs, donkey, and cats. To check soil erosion and maintain soil fertility, terrace farming is widely practiced in the hill-sides and areas that are gently sloping. Afforestation is also done in some farmlands for the some purpose.

3.12 Traditional Craft and Modern Industries.

Traditional craft refers to those industries engaged upon by craftsmen and women making use of the available raw materials found within their immediate environment. These industries equally make use of simple tools, thereby specializing in a particular product based on their artistic quality.

Though earthen pots are fading fast because of the introduction of plastic products produced by modern industries, pottery products is still practiced in the area and crafts such as basket making, brick making, weaving, leather works, dying are among the various crafts in the area. Local farm implements such as hoe, axes, knives, swards and spears, arrows and sickles are some of the traditional industries. Agricultural products such as grains, oil from groundnuts, local condiments "Daddawa" from locust beans, local wine (Burukutu) and cassava processing are among the traditional crafts in the area, and little capital is required to finance these industries.

Modern industries on the other hand are mostly located in the urban and semi urban areas. There are relatively large firms which involve large amount of capital, using advanced technology, specialized management and skilled work force in the area. These industries include quarries, large poultry firms, and agricultural processing industries at Rigasa. Furniture works and paper industries are also found in the area.

3.13 Health Care Facilities

Health care services in the LGA include; promotive (health education, food supply and proper nutrition); preventive (ie routine immunization, supply of portable drinking water, basic sanitation and the control of locally endemic diseases); and curative (ie supply of drugs to children and pregnant women, treatment of minor ailments delivery services and child welfare).

The area has one general hospital, one ophthalmic and one Armed Forces hospital located at Turunku, Mando and Jaji respectively. Also, there are 27 PHC centres spread over the LGA (see Table 3.2) with 117 medical staff, and 50 private clinics. Health care inducing facilities include; electricity spread over 25 villages' pipeborne water in Rigasa, Rigachikun, Afaka, Turunku and Mararaba Jos. There are 50 boreholes, 65 hand dugged concrete wells, over 265 open wells, rivers and streams (Igabi LGA, 2009). All the PHC centres have no ambulances, and inadequate admission facilities.

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

Many social factors are related to the health and diseases of a population group. It is known that the prevalence and rate of incidence of many illnesses vary from one group to another. A variety of diseases are associated with socio-economic status, and the utilization of health care services varies not only by social psychological characteristics of the population, but also social factors such as class or status, marital status and education. The way in which people deal with illness is also related to the ideas about cause and aetiology, which vary from one society to another (Datong, 1988).

4.2 Demographic and Socio Economic Characteristics of Respondents

4.2.1 Age and Sex Distribution

The age and sex structure of a population is the relative proportion of children, adults, and old and the sex structure is an expression of male-female proportion of a population. These two variables have important implications, that is, they determine the manpower supply, education and social services in the society.

Table 4.1 shows the distribution of respondents by age. The age is grouped into five-year age brackets for easy analysis and to conform to internationally accepted classification of age (Laah, 2003). In all, 69.9 percent of the respondents are within the age 15-39 years. This is a clear indication of the youthful nature of the population. This is not unexpected as the study area (Igabi LGA) has he highest number of people of any L.G.A in Kaduna State (NPC, 2009). A further analysis shows that age group 30-34 years has highest proportion.

Table 4.1: Distribution of Respondents by Age

Age Group	Frequency	Percentage
<15	22	5.1
15-19	61	14.0
20-24	57	13.1
25-29	56	12.9
30-34	65	14.9
35-39	64	14.7
40-44	39	9.0
45-49	29	6.7
50-54	16	3.7
55-59	12	2.8
60+	14	3.2
Total	**435**	**100.0**

Source: Field Survey, 2009

The relatively high percentage of the age group that are within less than 15 years to 29 years could be attributed to increase health care services in the rural areas since the inception of PHC, which has helped in reducing mortality rate in the country generally, while fertility rate remains high (FMOH, 2009).

The distribution of respondents by sex is shown in Figure 4.1. A total of 53.1 percent of the respondents are males as against 46.9 percent for females. Data from NPC (2009) indicates that for Igabi LGA there are more males than females. Also men were more accessible than women at the time of the survey, and in some cases women have to seek for permission from their spouses or mother-inlaws before responding to the questionnaires.

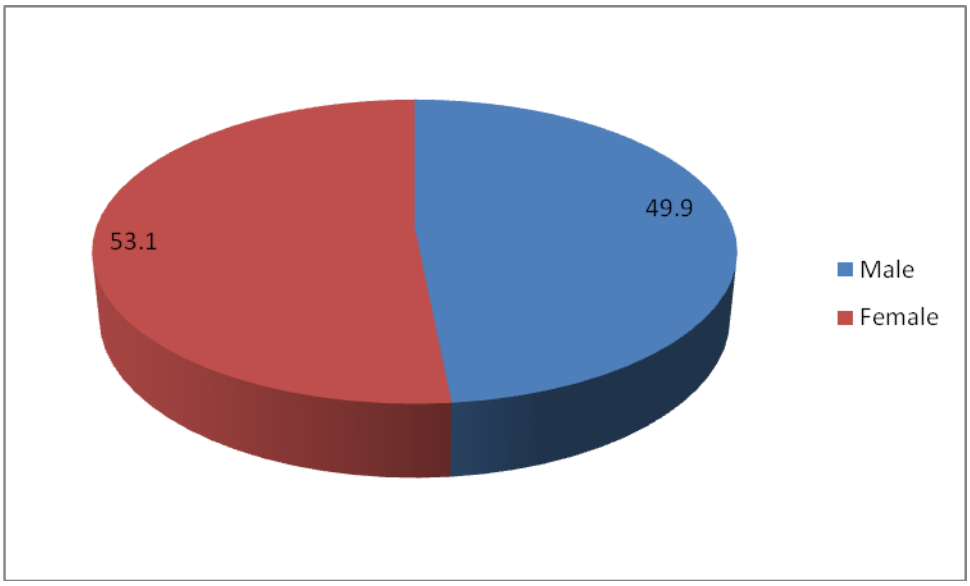

Figure 4.1: Percentage Distribution of Respondents by Sex

Source: Field survey, 2009

It is important to also note that the Pudah system which is widely practiced in the area made it quite difficult to reach the female population group.

4.2.2 Marital Status and Type of Marital Union

In this study, 66.0 percent are found to be currently married, 0.7 percent are separated, 1.8 percent are divorced while 8.5 percent are widowed (see Table 4.2).

Majority of the sampled population are currently married. This is partly because the study area is predominantly a rural and Muslim setting, marriages between males and females is contracted quite early because of cultural and religious reasons. Though the rate of divorce and widowhood is quite high in sub-Saharan Africa (Laah 2003), the rate of remarriage is equally high especially in Muslim dominated areas where staying without a husband or wife at the age above 18 years is regarded as an act of irresponsibility. This is partly the reason for the low proportion of respondents who are divorced and widowed.

Table 4.2: Distribution of Respondents by Marital Status and Type of Union

Marital Status	**Frequency**	**Percentage**
Single	97	22.3
Married	290	66.7
Divorced	3	0.7
Separated	8	1.8
Widowed	37	8.5
Total	**435**	**100.0**
Type of Union		
Polygamy	270	62.1
Monogamy	165	37.9
Total	**435**	**100.0**

Source: Field Survey, 2009

Distribution by type of marital union as shown in table 4.2 reveals that 37.7 percent of the married respondents is in monogamous union while 62.3 percent are in polygamous union. Majority of the sample survey are in polygamous because the study area is dominated by Muslims and Islam legally allows and encourages polygamy. Similar studies have found that the proportion of polygamous households were more than the monogamous homes (Laah, 2003).

From Table 4.3, Shows that 41.1 percent of the respondents were first married before the age of 20 years. The implication for the health of women is that girls who marry and become pregnant before the age of 20 years have higher chances of dying or developing complications (Igbuzor, 2006).

Table 4.3: Distribution of Respondents by Age at First Marriage

Age at marriage	**Frequency**	**Percentage**
No response	84	19.3
Less than 15	38	8.7
15-19	141	32.4
20-24	94	21.6
25-29	51	11.7
30-34	21	4.8
35+	6	1.4
Total	**435**	**100.0**

Source: Field Survey, 2009

About 33.3 percent of the sample population said that their first marriage was contracted when they were within the age of 20-34 years while 1.4 percent married within the age of 35 years and above 19.3 percent of the respondents made no response because the question was directed only to married people.

In the Focus Group Discussions (FGDs), most discussants, especially the females confirmed that their marriage was contracted at the age of 13 years, like one woman explains:

> *"I got married when I was only 13 years and now I am 45 years old, with 10 children who are alive. I became very ill when I gave birth to the second child when I was 17 years, but, thank God I was treated by one doctor."*

4.2.3 Religious Affiliation

Figure 4.3 shows the distribution of respondents by their religion. 65.7 percent of the respondents interviewed are Muslims as against 31.5 percent Christians and the traditionalists/pagans constitute 2.8 percent. Igabi LGA is predominantly a Muslim settlement, the Christian population is mostly concentrated around Jaji, Mando, Kudanda and to an extent Barka-Lahu and Maraba Jos .

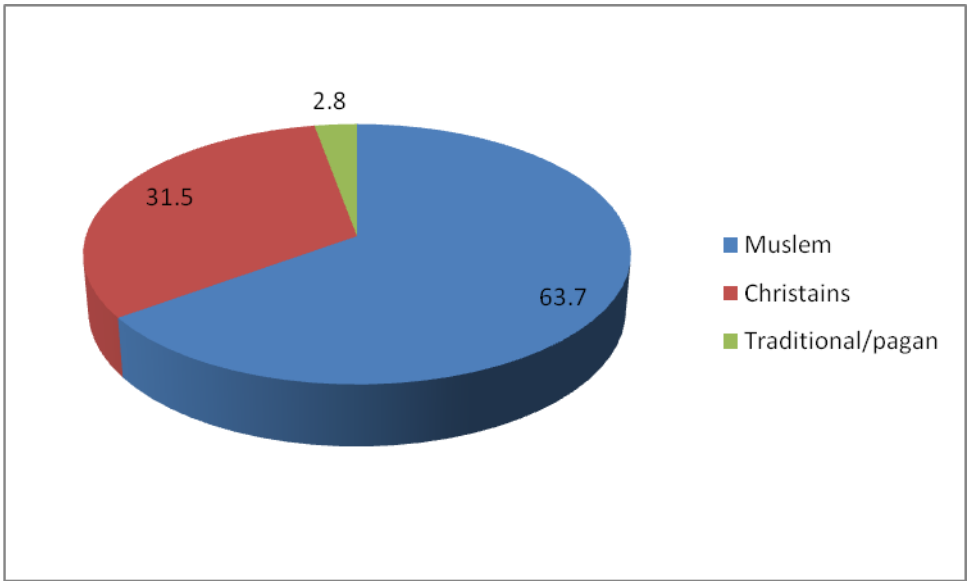

Figure 4.2: Percentage Distribution of Respondents by Religion

Source: Field Survey, 2009

Religious affiliation has implication on the health Status of the people .The Avoidance of certain foods for religious reasons have direct impact on the attainment of balance diet.

4.2.4 Number of Children Ever-Born

The percentage distribution by number of children ever born is shown in Figure 4.3. In all 23.2 percent of the respondents have no children. This proportion is high because of the percentages that are single (see Table 4.2). About 4.5 percent of the respondents indicate that they have ever born between one to two (1-2) children, while 31.7 percent agreed that they have ever born between three to six (3-6) children. The Figure further shows that 40.6 percent of the respondents indicate that they have ever born between seven to ten (7-10) children and above.

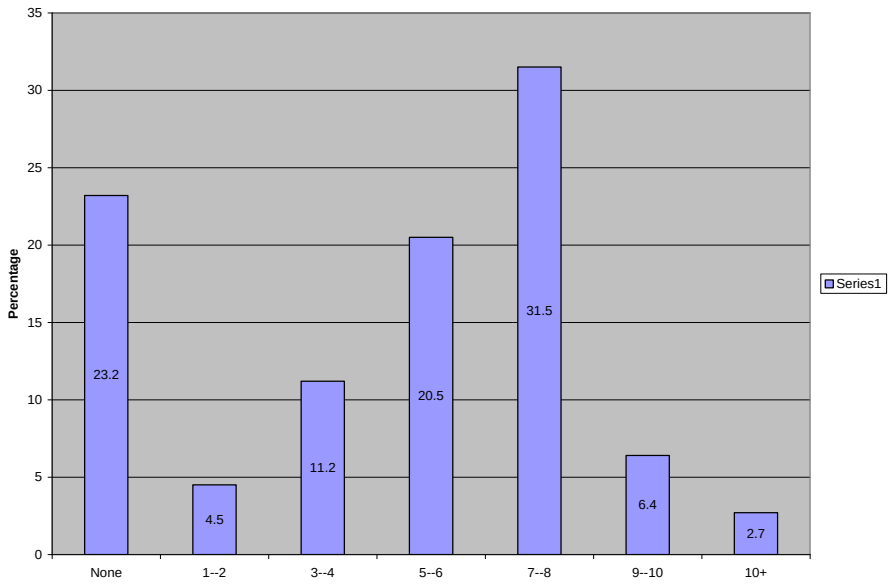

Figure 4.3: Percentage Distribution of Respondents by Number of Children Ever-Born.

Source: Field Survey, 2009

Figure 4.3, further shows that 52.0 percent of the respondents had ever born seven children and above, an indication that Total Fertility Rate (RFR) in the study area is high. This is typical of what is seen in Sub- Sahara Africa, where TFR is 6.9 (NPC, 2009}

4.2.5 Household Size

Another variable closely related to the number of children ever born is the household occupancy. Table 4.4 shows the percentage of respondents by household occupancy. It shows that 10.6 percent of the respondents indicate a house hold size of one to two (1-2) people living in their houses while 11.5 percent agreed that they have three to four (3-4) people in their houses. A total of 76.8 percent of the whole respondents agreed that they have between five to ten (5-10) people and above currently living in their houses, and 1.1percent did not respond to the question.

Table 4.4: Distribution of Respondents by House Hold Size

Number of People	**Frequency**	**Percentage**
1-2	46	10.6
3-4	50	11.5
5-6	212	48.7
7-8	90	20.7
9-10	20	4.6
10+	12	2.8
No response	5	1.1
Total	**435**	**100.0**

Source: Field Survey, 2009

The data reveals that the average household size in Igabi LGA is above the national average, which is five (5) per household (NPC, 2009).This again identifies the fact that there is the problem of overcrowding in most of the houses in the study area. This situation can

lead to outbreak of communicable diseases such as measles, cholera, meningitis, whooping cough and other airborne diseases in the area.

4.2.6 Level of Education

Figure 4.4 reveals the distribution of respondents by level of education. It shows that 21.0 percent of the sampled population has no formal education, while 9.9 percent indicate that they have attended Koranic education. A total of 32.0percent had secondary while 29.2 percent had tertiary education.

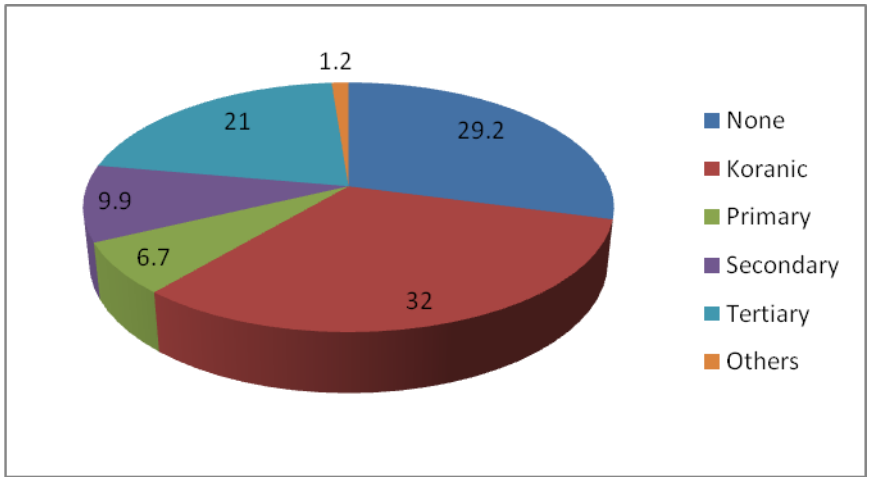

Figure 4.4: Percentage Distribution Respondents by Level of Education

Source: Field Survey, 2009

The relatively high proportion of respondents with Koranic education (9.9percent) has to do with the significant proportion of Muslims in the study area and Koranic education is a basic learning stage in Islam. The high proportion of secondary school education is due to the introduction of Universal Basic Education (UBE) in Nigeria, which allows direct transition to Junior Secondary School with or without any form of examination. With this total school enrolment in both public and private schools have increased. Also given the higher rate of rural-urban migration by young school leavers in search of "white collar" jobs, semi urban and urban areas like Jaji, Mando and Rigasa attract more migrants.

It is therefore possible that there is greater awareness in the area especially in health related matters.

In the FGDs and in-depth interviews that was conducted with individuals and health care personnel, it was confirmed that one of the major causes of ill-health and death in the study area is poverty and ignorance which is caused by low level of education.

4.2.7 Distribution by Occupation

The precarious level of occupation held by the majority of people in Nigeria; particularly in the rural areas have an important role to play in the health status of the inhabitants. The type of occupation therefore determines the incomes of individuals which could also have direct bearing on health care seeking behaviour. For example, people with low income stratum often appear to be incapable of availing themselves of medical services or complying to medical orders and vice-versa.

Figure 4.4 show that 27.1 percent of the respondents are farmers. This category includes poultry and livestock farmers, peasant and commercial farmers. Majority of the respondents are farmers because the study area is predominantly a rural setting and agricultural activities is their major occupation. About 17.7percent are civil and public servants, and also include the armed forces and the police. House-wives also account for a significant proportion of the respondents with 13.3percent.

Most of the respondents who are into business or petty trading work either on their own or on family-owned business enterprises represent 11.7 percent. Also, 12.2percent are students, the unemployed account for a significant proportion of the sampled survey with 17.7percent. Increase in youth unemployment which is seriously affecting the country is

responsible for the high proportion of the unemployed. Other category of occupation include tailors, mechanics, drivers and welders represent 0.2 percent of the sampled population.

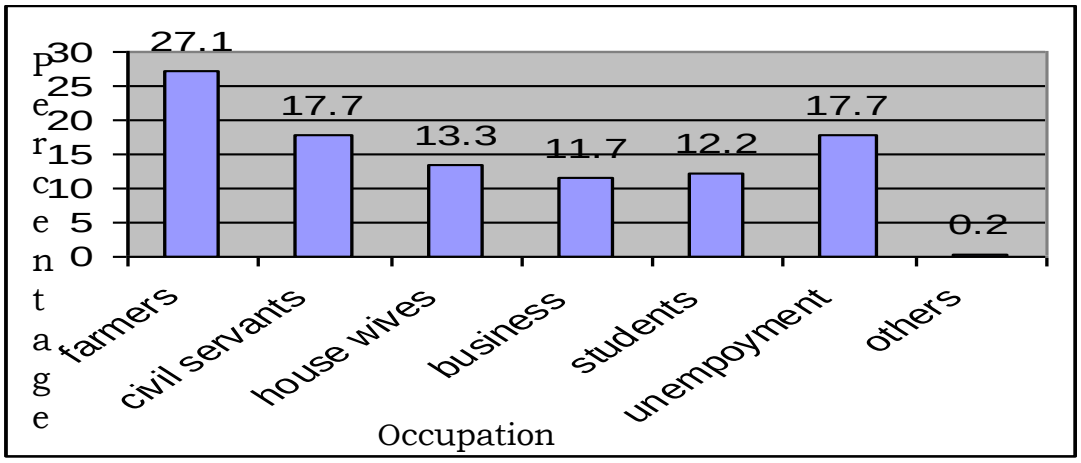

Figure 4.5: Percentage Distribution of Respondents by Occupation

Source: Field Survey, 2009

4.2.8 Income Level

Table 4.5 shows the distribution of respondents by income. On the whole, 76.6percent of the respondents have a monthly income of ₦14,000, or less, 19.8percent have monthly income of between ₦15,000 - ₦19,000, 30percent earn a monthly income between ₦20,000 – ₦24,000, while only 0.7percent earn above ₦25,000. The relatively high proportion of farmers is probably responsible for the high percentage of respondents that earn between ₦5, 000- ₦9, 000. Accordingly to the National Housing policy of the Federal Republic of Nigeria (1991), 70 percent of Nigerians fall in this category.

Table 4.5: Distribution of Respondents by Monthly Income.

Income	Frequency	Percentage(percent)
₦5,000-₦9,000	177	40.7
₦10,000- ₦14,000	156	35.9
₦15,000- ₦19,000	86	19.8
₦20,000- ₦24,000	13	3.0
₦25,000 and above	3	0.7
Total	**435**	**100.0**

Source: Field Survey, 2009

The significant proportion of farmers, housewives, students and unemployed responsible for high proportion of respondents with a monthly income of ₦14,000 or less. It can also be tied to the level of education and insufficient lucrative jobs in the study area. Also it is likely that low income group dominate in the LGA as such the inhabitants are too poor to access expensive medical facilities. This is an indication that income levels reported generally seems low. It can therefore be concluded that most people do not like discussing their actual income level.

4.2.9 Type of Accommodation

Table 4.6 shows the distribution of respondents by type of accommodation occupied. About 81.7 percent of the respondents live in one or two room accommodation and 17.4 percent live in either a flat or duplex. The 0.9 percent for the 'others' category are those respondents who mentioned that they are either squatters or living in a hostel.

Table 4.6: Distribution of Respondents by Type of Accommodation

Type of Accommodation	Frequency	Percentage
One room	225	51.7
Two rooms	130	30.0
Flat	31	7.1
Duplex	45	10.3
Others	04	0.9
Total	**435**	**100.0**

Source: Field Survey, 2009

This situation is serious when we take into consideration the household size occupancy ratio in the study area (see Table 4.4), implying that the standard of living in the area is very low, and overcrowding and squatters are glaringly apparent, an essential feature of a low-income society (Laah, 2003). Consequently outbreak of communicable diseases may take place, with serious negative effects on the population.

4.2.10 Infant and Child Mortality

Infant mortality is a measure of death within the first year of birth, and it ranges from 50 to 150 per 1000 in most developing countries (Obionu, 2007). In Nigeria, infant mortality rate is 99 per 1000. Child mortality on the other hand means death before the age of five years, and this account for approximately 40 percent or more of the total mortality in most developing countries (WHO/UNICEF, 2006).

Table 4.7 shows the distribution of respondents by number of children who died before the age of two years. A total of 62.5 percent of the respondents indicate that between one and two (1-2) children have died before the age of two years, while 14.9 percent said the number falls between three to five (3-5) children, 2.8 percent of the sampled survey also indicate that children who died before the age of two years fall between six to nine (6-9), and 19.8 percent agreed that none of their children ever died.

Table 4.7: Distribution of Respondents by Number of Children who Died Before the Age of Two

Number	Frequency	Percentage
None	86	19.8
1-2	272	62.5
3-5	65	14.9
6-9	12	2.8
10+	0	0.0
Total	**435**	**100.0**

Source: Field Survey, 2009

The distribution of respondents by the number of children who died between three and five years is another important parameter in this study. Table 4.7 shows the distribution of respondents by the number of children who died between three to five (3-5) years. A total of 11.7 percent of the total respondents shows that none of their children ever died within the age bracket of three to five years. 86.0 percent of the whole respondents indicate that between one to three (1-3) children have died between the age of three to five years while 1.4percent and 0.9percent of the proportion agreed that between four to six (4-6) children and above six (6) children have died between this age bracket.

Table 4.8: Distribution of Respondents by the Number of Children Who Died Between 3-5 years.

Number	Frequency	Percentage
None	51	11.7
1-3	374	86.0
4—6	6	1.4
6+	4	0.9
Total	**435**	**100.0**

Source: Field Survey, 2009

Table 4.7 and 4.8, it is quite obvious that infant and child mortality is very high in the study area. This is partly due to the level of their incomes and literacy, which is low, as a result their children are exposed to health hazards than those of the better educated and high income earners.

CHAPTER FIVE

PHC HEALTH CARE SERVICES AND UTILIZATION IN IGABI LGA

5.1 Introduction

The availability and utilization of health care services is affected by the distance separating potential patients from the nearest health care facility, cost of treatment, quality of health care provided, cultural barriers, socio-economic and educational status. Unfortunately access to the available health care delivery services in Nigeria, including Igabi LGA is highly inadequate. Moreover, these few facilities often cover wide geographic areas with large number of people depending on them. Inadequate transport system and cost of transport further limit actual coverage. This plight is further aggravated by the mal-distribution of medical personnel with overwhelming majority of them practicing in urban and local government headquarters. As a result, the delivery of health care system faces a lot of setbacks.

5.2 Distribution by Availability of PHC Centres and Types

Figure 5.1 shows the distribution of respondents by availability of health care centres. It shows that 52.2percent the respondents have PHC centres in their communities while a significant proportion of the respondents (47.8 percent) indicate that they have no PHC centres.

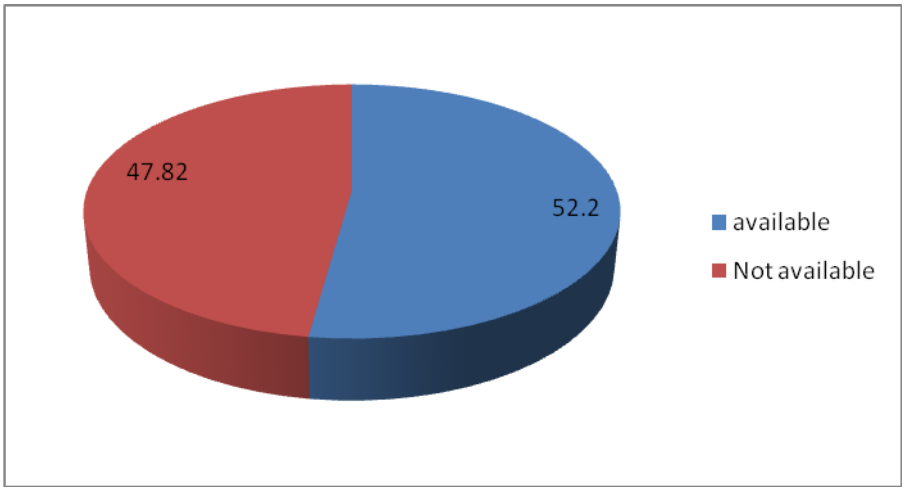

Figure 5.1: Percentage of Respondents by Presence of PHC centres

Source: Field Survey, 2009

The distribution of respondents by type of PHC centres is shown in Table 5.1. A total of 83.3percent of the respondents indicate that they have dispensaries in their communities; 12.4percent said that they have clinics in their areas, while 0.2percent of the respondents indicate that they have specialist hospitals. A total of 0.5 percent each indicates that they have herbal/traditional homes and general hospitals, a total of 0.2percent for the "others" respondents mention that they have pharmacies, patent medicine stores and insurance hospitals.

Table 5.1: Distribution of Respondents by Types of PHC Centres

Type	**Frequency**	**Percentage**
No response	4	0.9
Dispensary	371	85.3
Clinic	54	12.4
Specialist hospital	1	0.2
Herbal/Traditional home	2	0.5
General Hospital	2	0.5
Others(Specify)	1	0.2
Total	**435**	**100.0**

Source: Field Survey, 2009

From this analysis, it is clear that there are more dispensaries in the study area. This is to be expected because the study area is largely a rural setting and the establishment of hospitals (specialist) tends to favour urban, semi-urban and local.

5.3 Distribution by Ever Visited to PHC Centres

The aim of PHC is to make people value not only health but how to achieve it. Like any other social services provided by the government, PHC facilities should be located so that people living in various communities can have physical access to them. Figure 5.2 gives us the distribution of respondents by ever visited to PHC facilities. About 57.0 percent of the total respondents indicate that they have visited the PHC centres in their areas, while 43.0 percent agreed that they have never visited a PHC centre. The relatively high proportion of respondents who have never visited a PHC centre does not mean that respondents in the area do not seek health care delivery as the patronage of herbal medicine practitioners could be a factor.

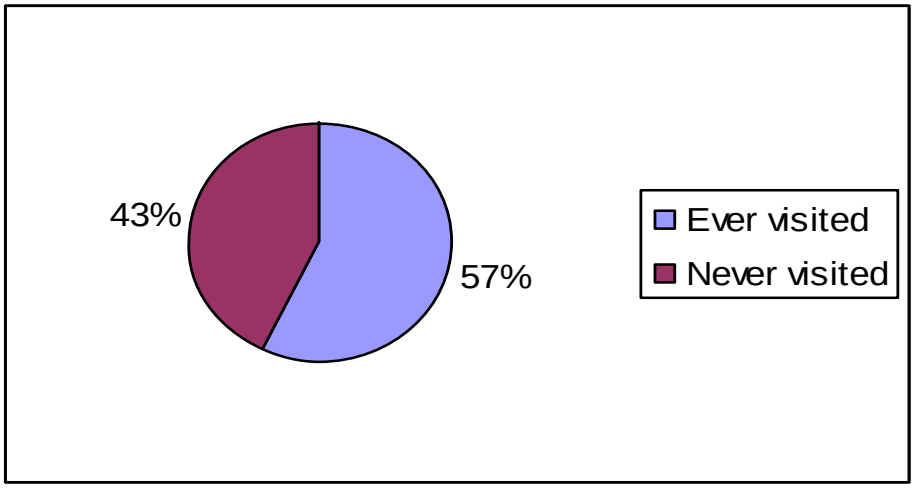

Figure 5.2: Percentage Distribution of Respondents by Ever Visited PHC Centres

Source: Field Survey, 2009

This situation explains why traditional medicine is gaining more grounds especially in the rural areas (Datong, 1988).

5.4 Distances to PHC Centres from Home

Table 5.2 reveals that 47.1 percent of the respondents are within 4 kilometers of a health care facility. The World Health Organization (WHO) has recommended that a health care facility shall be within 0-4 kilometers (WHO, 1978), while 52.9percent are living within the radius of five to seventeen kilometers (5-17 km) and above. This implies that majority of the people in the study area are not within easy reach of a health care facility.

Table 5.2: Distribution of Respondents by Distance to PHC Centres

Distance	Frequency	Percentage
< 2 km	95	21.8
2-4 km	110	25.3
5-7 km	85	19.5
8-10 km	65	15.0
11-13 km	50	11.5
14-16 km	20	4.6
17km+	10	2.3
Total	**435**	**100.0**

Source: Field Survey, 2009

From the FGDs, discussants revealed this situation, as one of them comments thus;

> *"The government should know that we are human beings like them, who need hospitals, good roads and portable drinking water, they should provide our villages with hospitals that would be closer to us or provide us with good roads so that we can have easy reach to the hospitals they have built in other communities".*

5.5 Types of Diseases Prevalent In the Area

Table 5.3 shows the distribution of respondents by types of disease prevalent in the area. On the whole, 44.8percent of the total respondents suffer from malaria fever, ranking the highest in the study area. This is followed by typhoid fever with a proportion of 17.2percent. A total of 11.5 percent, 8.7percent each indicate that they suffer from hypertension and diarrhea respectively, while 6.9percent of the proportion said they are suffering from ulcer. Cholera and diabetes represent 4.6percent and 4.1percent of the

respondents respectively. Other types of illness include dracunculiasis, headache and cough, each representing 0.5percent of the respondents. The “others” category has 0.7 percent and this includes those who suffered from nose bleeding, body pains, accident and eye problem.

Table 5.3: Distribution of Respondents by Disease Prevalence

Disease	**Frequency**	**Percentage**
Malaria Fever	195	44.8
Typhoid Fever	75	17.2
Hypertension	50	11.5
Diarrhea	38	8.7
Ulcer	30	9.6
Cholera	20	4.6
Diabetes	18	4.1
Headache	2	0.5
Dracunculiasis	2	0.5
Cough	2	0.5
Others (specify)	3	0.7
Total	**435**	**100.0**

Source: Field Survey, 2009

These findings confirm what is known from other sources on the endemic and epidemic nature of malaria, and being one of the major causes of ill-health and death in sub-Saharan Africa (WHO/UNICEF, 2009). Typhoid fever, cholera and diarrhea are common in the area, this is partly because of inadequate access to safe drinking water, because majority of the inhabitants in the area depend on unhygienic sources of drinking water from rainfall, shallow wells, ponds, and streams.

5.6 Distribution by Availability Prompt services at PHC Centres

To understand the level of attention given to patients at PHC centres, respondents were asked to reply to the question “Do you receive prompt attention at the PHC centre?”

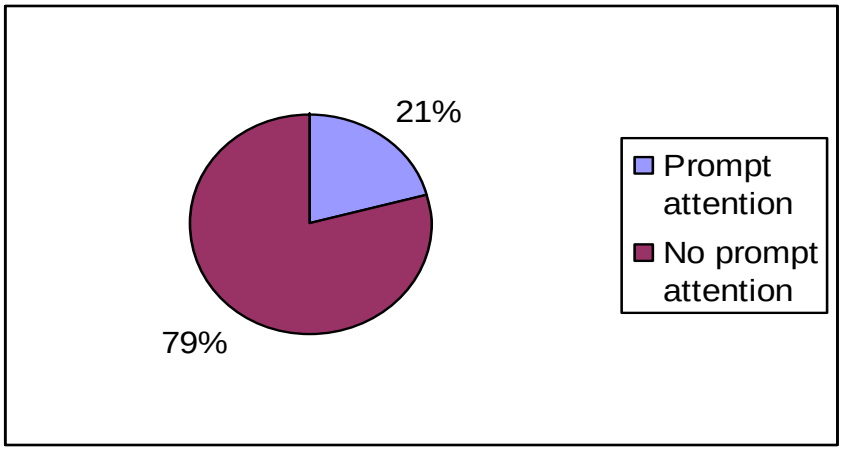

Figure 5.3: Percentage Distribution of Respondents by Attention Given to Patients at PHC Centres

Source: Field Survey, 2009

It is obvious from figure 5.3 that prompt services at PHC centres in the area are low. A total of 79.0 percent of the whole respondents do not receive prompt services at the PHC centres by the medical workers, while 21.0 percent of the respondents indicate that they are accorded with prompt services..

Table 5.4 shows the distribution of respondents by reasons for lack of prompt services at the PHC centres. It shows that 66.7 percent of the whole respondents indicate that there is shortage of health care personnel in the area. A total of 17.5 percent of the total respondents interviewed are of the opinion that health care staff are hostile to the patients at the health centres.

Table 5.4: Distribution by reasons for Lack of Prompt Services

Reason	**Frequency**	**Percentage**
Shortage of staff	290	66.7
Hostility of staff	76	17.5
Shortage of equipment	32	7.4
Shortage of drugs	25	5.7
Others (specify)	12	2.7
Total	**435**	**100.0**

Source: Field Survey, 2009

The table shows that 7.4 percent of the respondents believe that the hospital experience shortage equipment, and as such, workers cannot perform their duty effectively,

while 5.7 percent of the sampled survey are of the view that there is shortage of drugs at the facility centres. The 2.7 percent for the "others" category comprises of respondents who mention high cost of available drugs, lateness of health care staff to work, lack of enough privacy during consultation as reasons why patients do not receive prompt attention at the PHC centre. Studies on health care delivery system by Alakija (2004), Obionu (2007) has confirmed these reasons as some of the problems of PHC delivery system in Nigeria.

Most discussants from various groups during the FGDs and in-depth interviews revealed that institutional factors at the health care centres such as hospital procedures, staff attitudes to patients, long waiting time, lateness of medical staff to work, slow medical records and cumbersome protocol among others are some of the reasons for the delay in receiving treatment at the health care centres. The major complaint was the attitude of the health care nurses, some of the discussants described them as "hash and inconsiderate".

5.7 The Perception of Patients to the Quality of Treatment

Treatment of patients at a health facility is an important dimension of the patient's assessment of the quality of care (Annis, 1981). If the facility has a reputation of unfriendly staff, rude service providers and humiliating treatment, patients may even delay their decision to seek for medical care until the seriousness of their condition necessitates over-coming all barriers, or may rather seek for alternative medicines.

The study therefore considers the perception of patients on the quality of treatment of patients by the medical personnel in the study area.

Table 5.5: Distribution of Respondents by Quality of Treatment by Health Care Staff.

Perception	**Frequency**	**Percentage**
Very Good	70	16.0
Good	110	25.3
Average	65	15.0
Poor	170	39.1
Very Poor	20	4.6
Total	**435**	**100.0**

Source: Field Survey, 2009

Table 5.5 shows that 16.0percent of the respondents are of opinion that the quality of treatment by health care providers. A total of 25.3percent are of the opinion that the health care personnel treat their patients well, while 15.0 percent indicate that the quality of treatment is average. The (Table 5.5) also shows that 39.1percent of the total respondents agreed that the patients have poor perception about the Quality of treatment by health care workers, while 4.6 percent of the respondent said that the quality of treatment by is very poor.

On the average, the patients have a good perception on the quality of treatment by health care workers in the study area. This was confirmed during the in-depth interviews conducted with some of the community leaders and household heads. The question was asked, "What is your perception on how health care workers treat their patients"? A community leader in Rigasa explains thus;

> *"Some of the doctors are good to their patients while others rush the work. The relationship between the nurse and the people in our community is good, she is even part of our community, she lives and knows what most of the people's situations are like".*

This statement indicates that there is a good relationship between health care staff and their patients.

5.8 Adequacy of Health Care Facilities

Respondents were asked to indicate whether the health care facilities are adequate in the health care centres. Figure 5.4 shows the distribution of respondents by their perception on the level of adequacy of health care facilities. It shows that 26.0 percent of the respondents agreed that health care facilities are adequately provided while 71.1 percent indicate that there is no enough facilities at the health care centres. A total of 3.0 percent of the respondents did not reply to the question.

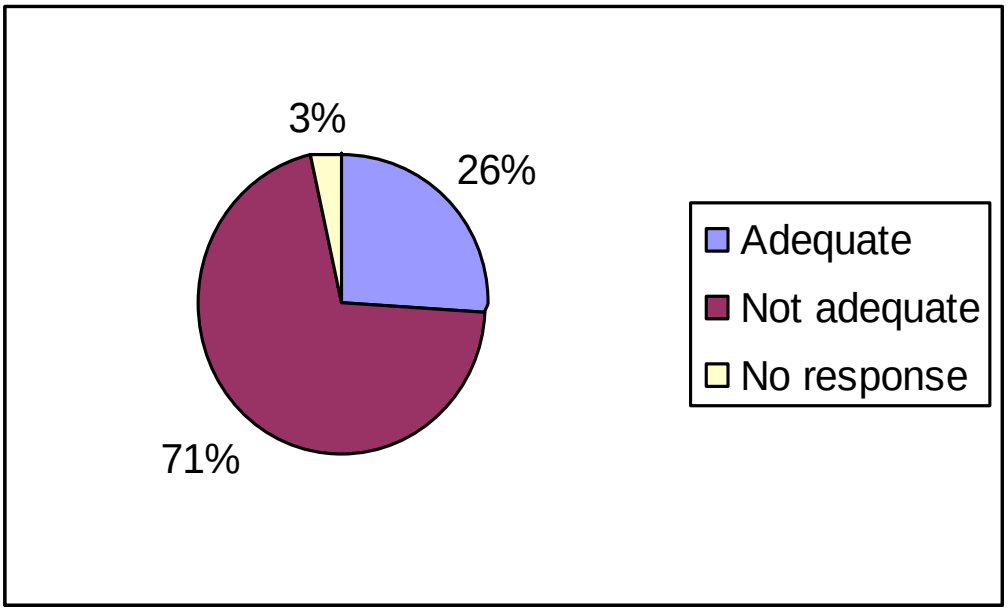

Figure 5.4: Percentage Distribution of Respondents by Adequacy of Health care Facilities

Source: Field Survey, 2009.

It is obvious from figure 5.4 that there is serious shortage of health care facilities in the study area. This finding again confirms earlier studies by Ademola (1981), Bisallah (2002) on poor state of health care services in developing countries.

5.9 Distribution by Friends/Relatives Who Died From Pregnancy and Child Birth and Reasons for Death

Pregnancy and child birth are well recognized as being hazardous in most developing countries including Nigeria (Annis, 1981). Death during pregnancy and pueperium has continued to be a public health problem in Nigeria (Alakija, 2004).

Figure 5.5 shows the distribution of respondents by friends/relatives who died from pregnancy and childbirth. It shows that 64.1percent of the respondents interviewed indicate that their friends and relatives had died from pregnancy and childbirth as against 35.9percent who reported that none of their relatives has died from such situations.

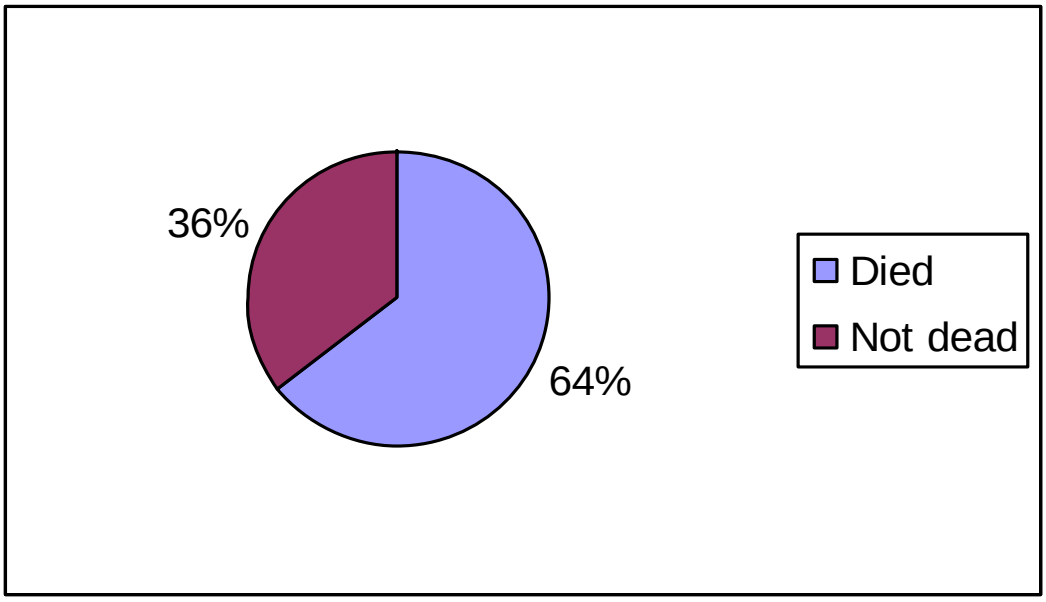

Figure 5.5: Respondents by Friends/Relatives who Died due to Pregnancy and Childbirth.

Source: Field Survey, 2009

Other findings on maternal mortality by the Federal Bureau for Statistics (2008) has confirmed the severity of maternal mortality ratios in Nigeria, putting the country as having the highest rate in sub-Saharan Africa.

A test of the understanding why women die due to pregnancy and child birth was conducted by simply asking the respondents "what was the cause of her death?" Table 5.6 shows the distribution of respondents by causes of death from pregnancy and child birth. It shows that 57.5percent of all the respondents indicate that their friends and relatives died due to prolong labour, 9.2percent admitted their relations died from miscarriages, while 25.3percent agreed that they died as a result of obstructed labour. Those who died from pregnancy induced hypertension rank 5.3percent while the "others" respondents mentioned induced abortions, malaria, anemia and stillbirth as some of the causes, representing 2.5 percent.

TABLE 5.6: Distribution of Respondents by Causes of Death during Pregnancy and Child Birth.

Cause of death	**Frequency**	**Percentage**
Prolong labour	250	57.5
Miscarriage	40	9.2
Obstructed labour	110	25.3
Pregnancy induced hypertension	23	5.3
Others (specify)	12	2.5
Total	**435**	**100.0**

Source: Field Survey, 2009

Studies in maternal mortality also reported that over 500,000 women die annually due to pregnancy complication from obstructed labour, hemorrhage, sepsis and eclampsia (Adesegun, 2004).

5.10 Distribution by Availability of Maternal Clinics and Utilization.

Respondents were asked to mention whether there are clinics for pregnant women in their areas and the level to which these clinics are utilized. Figure 5.6 shows the distribution

of respondents by availability of maternal clinics. It shows that 65.0percent of the total respondents indicate that there are clinics for pregnant women in their communities, while 35.0 percent have none.

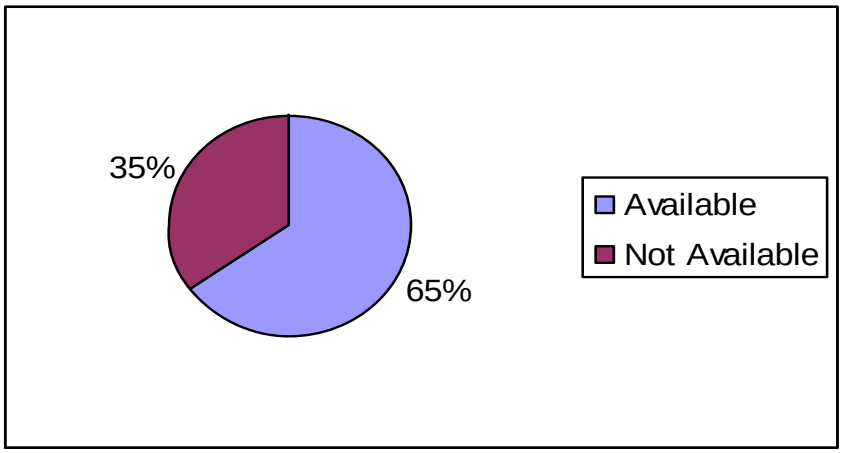

Figure 5.6: Percentage Distribution of Respondents by Availability of Maternal Clinics
Source: Field Survey, 2009

Figure 5.7 shows the level of utilization of maternal clinics in the area. About 60. 0 percent of the respondents indicate that they have attended maternal clinics in their areas as against 40.0 percent who said they have never attended maternal clinics.

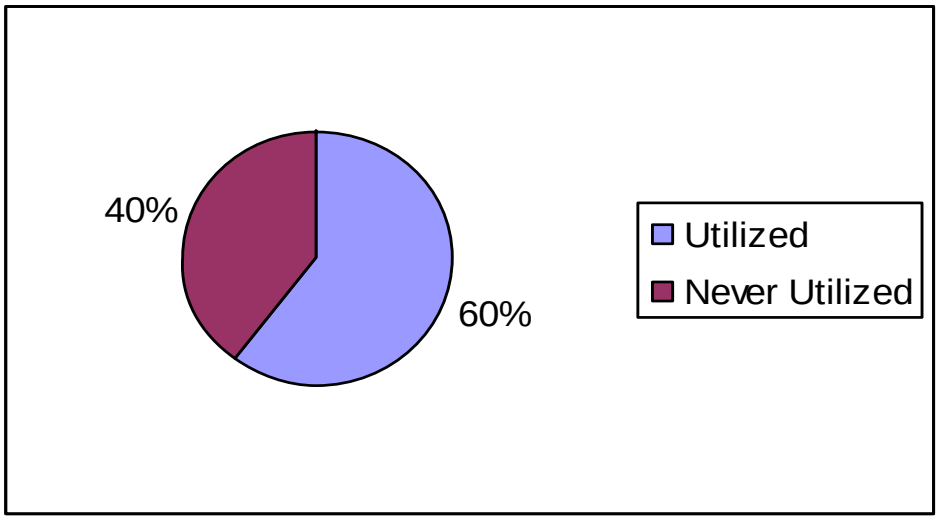

Figure 5.7: Percentage Respondents by Maternal Utilization.

Source: Field Survey, 2009

Lack of clinic attendance by pregnant women is partly because of lack of money, distance of the clinic from home coupled to transport and treatment cost as well as cultural prescription and severity of restrictions on mobility of women generally in the area (Harrison, 1978).

5.11 Distribution who Decides Treatment during Pregnancy and Child Birth

In this study, only female respondents were asked to give their responses on who is responsible for taking decisions for their treatment during pregnancy and childbirth. In many parts of Africa including Nigeria, pregnancy and childbirth are ambiguous events, though acknowledged as potentially risky, pregnancy and delivery are commonly considered natural, and normal for women (Auerbach, 1982). This means that death during labour and childbirth may sometimes be considered normal. Such fatalistic views can lead to the perception that the condition is not amenable to treatment, and can thus act as an effective barrier for timely decision to seek for health care.

Table 5.7 Show the distribution of respondents by who is responsible for taking decision for treatment of women during pregnancy and childbirth. On the whole ,26.8 percent of the respondents indicate that they take decision on the their own treatment during pregnancy and childbirth, while 35.1 percent and 12.4 percent agreed that only their husbands and mother-in-laws respectively take decision on their treatment during pregnancy and childbirth. About 20 percent of the proportion indicates that both of them (husband and wife) take decision on their treatment, and 5.7 percent for the “others” category comprises respondents who say decision for their treatment is affected by cultural and religious beliefs.

Table 5.7: Distribution of Respondents by who Takes Decisions on Treatment During Pregnancy and Childbirth

Decision	Frequency	Percentage
Only you	71	26.8
Only your husband	93	35.9
Your mother-in law	33	12.4
Both of you	53	20.0
Others(specify)	15	5.7
Total	**265**	**100.0**

Source: Field Survey, 2009

This findings show that treatment of most of the women in the study area is decided by husbands and mother-in-laws. Harrison (1978) in his study on child bearing in Zaria confirms this finding.

5.12 Distribution by Waiting Time

The time it takes a patient to be attended to by the health care providers at the centre is very important. In the analysis of access to health care delivery. The study considers the waiting time by patients as an important parameter, and the time given for diagnosis by the health care personnel very crucial. Table 5.8 shows the distribution of respondents by how long it takes to be attended to during visits to the health care centres in all 61.1 percent of the respondents indicate that antenatal patients have to wait for a long time (4-8hrs) before they are attended to by the health care personnel, while 38.9percent of the proportion agreed that antenatal patients spent only few minutes or hours (30min-3hrs) at the health care facility before they are attended to by a health care personnel.

Table 5.8: Percentage Respondents by Waiting Time During Antenatal days

Waiting Time	Frequency	Percentage
30 minutes	8	3.8
30 minutes -1hr	32	16.2
2 - 3hrs	39	18.9
4 – 5hrs	112	54.7
6 – 7 hrs	8	3.8
7 – 8 hrs	4	1.9
> 8 hrs	1	0.7
Total	**204**	**100.0**

Source: Field Survey, 2009

This analysis shows that there is long waiting time for pregnant women during antenatal days. Long waiting hours in hospital could be as a result of lateness to work by the medical personnel, registration procedure, organization of waiting hall and waiting at pharmacy stores (Olumide and Ajayi, 1999). This situation is explained by one of the market women during the in-depth interviews;

> *"A very busy women like me is embittered about the time I would be wasting while in waiting hall or at the pharmacy, because I have lost economic time on several visits to the hospital while waiting to see the doctor on antenatal days, and sometimes end up not seeing him."*

Long waiting period therefore has implications on access to health care services.

5.13 Availability and Cost of Drugs

The provision of drugs form an integral part of the overall health care delivery system, and the rating of the entire PHC delivery system is a function of the availability of drugs in the facility centres, for without drugs, a health care centre has no substance and credibility

Figure 5.8 shows the distribution of respondents by availability of drugs. It reveals that majority of the respondents (83.0 percent) indicate that drugs are available in the PHC centres, as against 17.0 percent who agreed that there are no drugs in these facility centres.

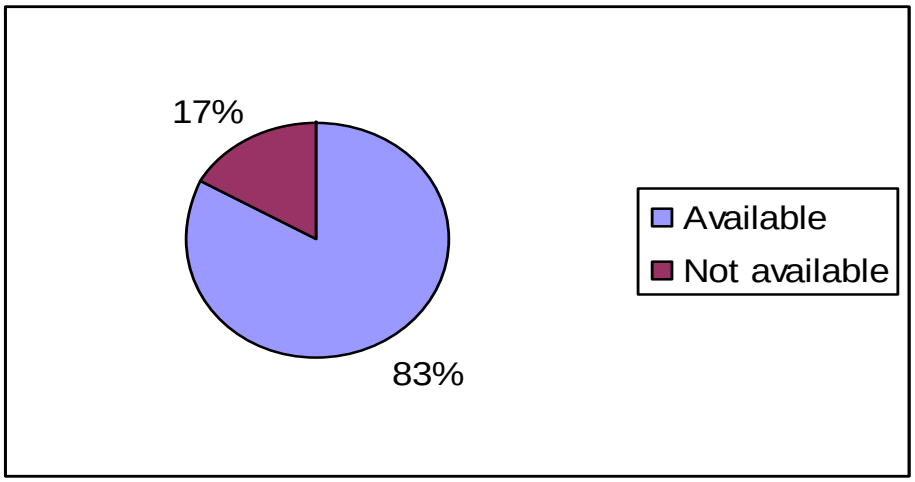

Figure 5.8: Percentage Respondents by availability of Drugs

Source: Field Survey, 2009

Though majority of the respondents agreed that drugs are available in most of the PHC centres, the survey further considers whether these dugs are affordable as enshrined in the Alma-declaration in 1978.

Table 5.9 shows the distribution of respondents by how costly the drugs are sold in the centres. It shows that 49.9percent of the whole respondents indicate that drugs are expensive at the PHC centres. The proportion of the respondents who indicate that the prices of drugs are moderate ranks 33.3percent of the total respondents, while 5.7percent agreed that the drugs are cheap, 11.0percent of the proportion did not respond.

Table 5.9: Percentage Distribution by Perception of the Cost of Drugs

Cost of Drugs	**Frequency**	**Percentage (percent)**
Expensive	217	49.9
Moderate	145	33.3
Cheap	25	5.7
No response	48	11.0
Total	**435**	**100.0**

Source: Field Survey, 2009

With the above analysis, it is obvious that drugs are expensive in the study area; which implies that drugs are not easily affordable for the majority of people in the area.

5.14 Sources of Information about Modern Health Care System.

Sources of information are important factors in innovation diffusion and ideas. Effective health care information is seldom achieved through the use of direct method of communication alone (Obionu, 2007). Often, there is the need to complement direct person-to-person(s) method by using other media, or indirect methods, whereby health messages are conveyed to the entire population.

Table 5.10 reveals the responses of respondents by sources of information's about modern health care system. It shows that 13.1percent of the respondents who have heard of modern health system mention friends as their source of information. The mass media (Radio, Television, Newspapers and Magazines) ranks the most commonly used source of information with 39.8percent, while government information services (circulars, displays, flipcharts and the medical personnel) ranks second most commonly used source of information about health care delivery with 37.9percent. Table 5.10 also shows that 6.4percent of the respondents indicate their source of information from the District Head Office (usually through the village and ward heads), while 1.8percent agreed that their source of information is from their worship centres. The 0.7percent for the "others" category are the respondents who said their sources of information is from story telling, town criers/messengers, films and songs.

Table 5.10: Distribution of Respondents by Sources of Information about Health Care

Sources	**Frequency**	Percentage
Friends	57	13.1
Mass Media	173	39.8
District Head Office	28	6.4
Govt Information Service	165	37.9
Religious Centres	8	1.8
Others(specify)	3	0.7
Total	**435**	100.0

Source: Field Survey, 2009

Finding from this study provides conclusive evidence that the mass media is the most powerful source of information on health care delivery in the area, and Nigeria at large. This is because it is the most acceptable means of communication because it can deliver messages to both literates and illiterate people, and it is relatively cheap (Laah, 2003).

5.15 Distribution by Immunization

Immunization is the preventive aspect of health care. The ultimate aim has been to induce active immunity in children between less than one month to twenty four months, and expectant mothers.

In this study, Figure 5.9 shows the distribution of respondents by immunization coverage. It reveals that 71.0 percent of the total respondents indicate that there is constant immunization in the area, while 29.0 percent agreed that there is no constant immunization.

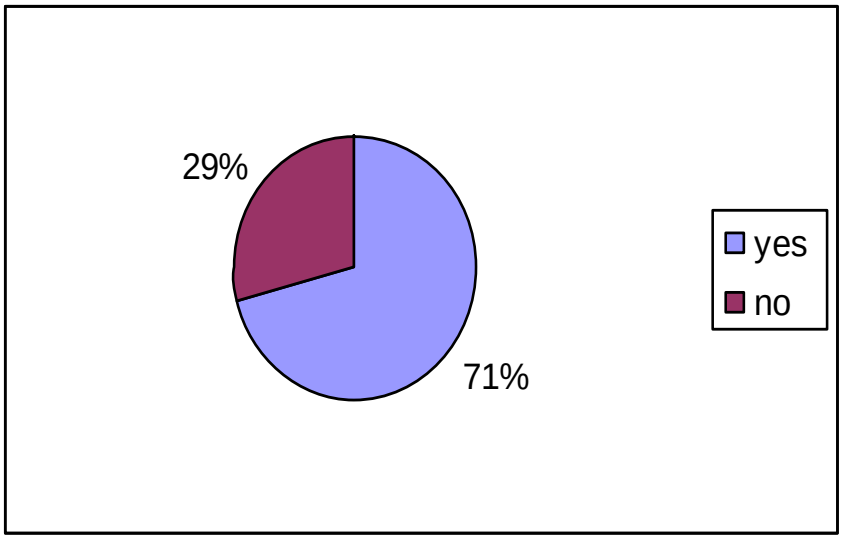

Figure 5.9: Percentage Respondents by Immunization.

Source: Field Survey, 2009

Though the study reveals that there is constant immunization in the study area, the WHO/UNICEF level of immunization coverage of at least 90percent of children under one year of age by the year 2000 and beyond in Nigeria is yet to be achieved (Obionu, 2007).

5.16 Community Contributions to PHC and Type of Contribution

Respondents were asked whether they have, in any way contributed to the development of PHC system in their communities

Figure 5.10: shows the distribution of respondents by their contributions to PHC centres in their areas. It shows that 41.0 percent of the respondents have contributed in one way or the other to the development of PHC system in the study area, while 59.0 percent said they have never contributed in any way.

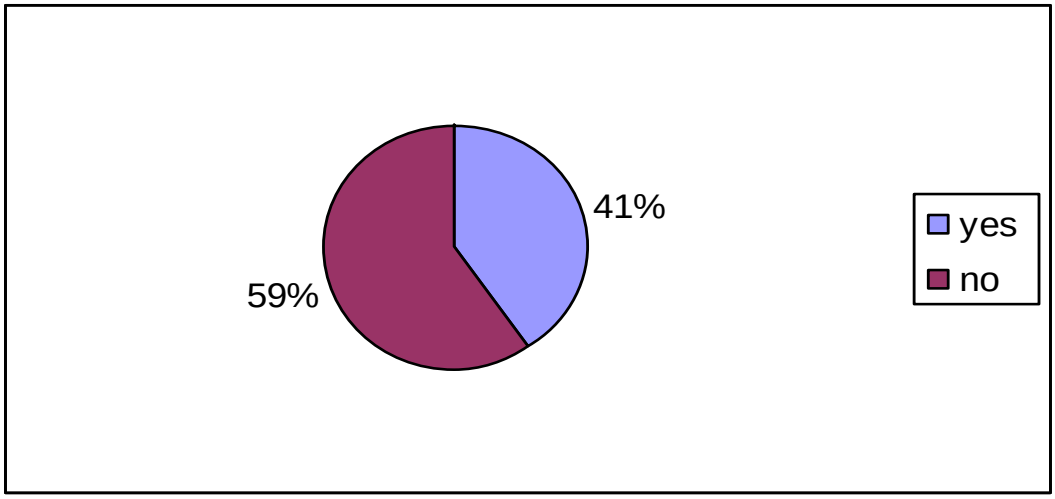

Figure 5.10: Percentage Respondents by Community Contributions to PHC System

Source: Field Survey, 2009

Community participation in PHC system is one of the most important principles of PHC. This ranges from taking part in decision-making on priority programs to providing manpower or resources to execute specific health projects. This is however lacking in the area as revealed in Figure 5.10.

Table 5.11 shows the distribution of respondents by type of contributions they have made towards PHC development. It reveals that 11.5percent of the total respondents have contributed by giving financial support to PHC centres in their communities. About 17.2percent and 9.2percent of the respondents made their contributions through the provision of free labour and drugs respectively, while 1.2percent of the sampled population agreed that they have made their contribution by providing furniture to PHC centres, only 0.5percent said they have provided vehicles to the centres. The Table (5.11) also shows that majority of the respondents (58.6percent) in the survey admitted that they have not contributed in any way toward PHC development. Other respondents who mention their contributions as prayers, security, providing accommodation to PHC staff and environmental cleaning (1.8percent) of the respondents

Table 5.11: Distribution of Respondents by Type of contributions

Type of Contribution	Frequency	Percentage
Financial	50	11.5
Free labour	75	17.2
Free drugs	40	9.2
Furniture	05	1.2
Vehicles	02	0.5
None	255	58.6
Others(specify)	8	1.8
Total	**435**	**100.0**

Source: Field Survey, 2009

From Table 5.11, it is obvious that the contribution of the community in PHC activities is very low. From the FGDs with the community leaders, health workers and supervisory councilors, it was revealed that various health committees have been formed in many communities in order to give the people a sense of belonging and ownership of the PHC centres. This was not the case as confirmed by a community leader at Farakwai Village:

> *"I didn't know anything about health committee in this area. I have never seen or heard anything like that in this town, therefore my people hardly contribute in other to assist the government in PHC delivery system".*

The above statement clearly shows the level of community participation is low in the study area.

5.17 Distribution by the Impact to the Development of the Area

The introduction of PHC has contributed to the development of the communities where they are located in several ways. Table 5.12 shows the distribution of respondents by the impact of PHC on the community. It shows that 49.2percent of the respondents interviewed are of the opinion that PHC has brought about increased standard of living in the area. The construction of roads ranks second most important contributions of PHC in the area, representing 21.6percent of the total respondents. The Table (5.12) also shows that

15.4percent of the respondents said PHC has contributed to the provision of infrastructures in the area, while 13.8percent of the "others" category of respondents mention the provision of electricity, pipe borne water, HIV/AIDs awareness and food production as their contributions of PHC to the development of their communities.

Table 5.12: Distribution of Respondents on the Impact of PHC Delivery System.

Contribution	**Frequency**	**Percentage**
Improved Standard of living	214	49.2
Construction of roads	94	21.6
Provision of infrastructures	67	15.4
Others(Specify)	60	13.8
Total	**435**	**100.0**

Source: Field Survey, 2009

Information from WHO/UNICEF (2009) shows that PHC delivery system has improved the standard of living of many rural communities in Nigeria through the provision of family planning programmes, knowledge about immunization against infectious diseases, prevention and control of endemic and epidemic diseases, promotion of nutrition and treatment of common diseases, and this has enhanced the health of many people, which in turn enhanced the productive capacity and their ability to indulge in socio economic and political activities.

5.18 Distribution by Challenges Facing PHC Delivery System.

Bisallash(2002) stated that the problems responsible for the poor performance of health care system are mainly the mal-distribution of health care facilities, inadequate coverage of limited accessibility, imbalance between curative and preventive services and poor management of health care facilities.

Table 5.13 shows the distribution of the respondents by the problems of PHC delivery system in the study area. It shows that the majority of the respondents (26.4percent) are of the opinion that lack of community participation in health care system is the major

problem affecting PHC in their areas. This is followed by inadequate facilities and poor funding of PHC centres with 22.3percent and 16.8percent respectively. A significant proportion of the respondents said, poor quality drugs in the area is a serious problem of PHC delivery, ranking 12.9percent. The Table 5.13 also shows that 8.3percent and 3.4percent of the respondents indicate that there is poor management and inadequate health care personnel in the area, while 3.0percent are of the opinion that lack of adequate infrastructures in the area constitute serious problems of PHC delivery system. The "others" respondents (3.7percent) are of the view that lack of adequate hospital equipment in the hospitals, poor sources of drinking water, lack of electricity in the rural areas and corruption are some of the problems of PHC in their areas.

Table 5.13: Distribution of Respondents by Problems of PHC System.

Problem	**Frequency**	**Percentage**
Lack of community participation	115	26.4
Inadequate facilities	97	22.3
Poor funding	73	16.8
Poor quality of drugs	56	12.9
Poor management	36	8.3
Inadequate staff	15	3.4
Poor infrastructures	13	3.0
Others(specify)	30	6.9
Total	**435**	**100.0**

Source: Filed Survey, 2009

5.19 Solutions to the Problems of Health Care Delivery System.

For Nigeria to adequately address the issue of PHC delivery, there is the need to increase the health care units as well as improving the existing ones, especially in the rural areas. Furthermore, the basic infrastructures and logistics support such as buildings, provision of medical equipment, electricity and particularly drugs and vaccines should be made available to the PHC centres (Alakija, 2004).

Table 5.14: Distribution of Respondents by Solutions to PHC System.

Solution	Frequency	Percentage
Government intervention	252	57.9
Community participation	106	24.3
Individual contributions	42	9.7
Contributions of Inter. Agencies	11	2.5
Corporate organizations	8	1.8
Others(specify)	16	3.7
Total	**435**	**100.0**

Source: Field Survey, 2009

From Table 5.14 it is obvious that government intervention will provide solutions to PHC delivery system in the area. Nearly 58.0percent of the whole respondents mention the intervention of government as the solution to PHC system. About 24.3percent of the respondents mention that community participation is a necessity in solving the problems of PHC in the area. A total of 9.7 percent of the total respondents indicated that individual contributions is needed to improve PHC system, while the contributions of international agencies and corporate organizations rank 2.5 percent and 1.8percent respectively and 3.7 percent representing the "others" category are of the opinion that the provision of gainful employment, increase in health care welfare and the introduction of adult education will help in solving the problems of PHC system in their areas.

5.20 Testing of Research Hypothesis

For the purpose of this study four hypotheses were formulated and tested, they include;

Hypothesis I: That the low level of education has led to lack of community participating in PHC in the area.

Table.15: relationship between Education and lack of community participation in PHC programmes.

Variables	N	Mean	SD	r	Degree Freedom	P	- critical
Education	435	2.6621	1.5608	0.861	433	0.000	0.195
Participation	435	1.4092	0.4923				

Source: Computed From Field Data, 2009

The results of the test reveal that low level of education is a significant factor of community participating in PHC programmes. The observed correlation coefficient (0861) is higher than the critical value of 0.195, and the observed level of significance (0.000) is lower than 0.05. This means that the two variables are significantly related, that low level of education can led to lack of participation. Therefore, the null hypothesis which stated that low level of education has led to lack of community participation is rejected.

The inference from this test is that low level of education is the principal factor to lack of community participation in PHC programmes. This study is in line with other studies (Datony, 1987; Bisallah, 2002; Mansoud, 2007) both stressed that ignorance, illiteracy and other social-cultural reasons are some of the factors affecting the full participation of rural communities in PHC programme.

Hypothesis II: There is no Significant Relationship Between Income Status and their Utilization of PHC Services.

TABLE 5.16: Relationship between Income and Utilization of PHC services.

Variables	N	Mean	S-D	r	Degree of freedom	P	r-critical
Income	435	1.8713	0.8783	0.673	433	0.000	0.195
Utilization	435	1.2276	0.6043				

Source: Computed From Field Survey Data, 2009

The correlation coefficient as shown in table 5.16 indicates that the observed r (0.673) is greater than the critical value of (0.195) at 433 degrees of freedom (DF) and at 0.05 level of significance. Therefore; the argument that there is no significant relationship between income status and utilization of PHC services is rejected.

It therefore shows that there is a strange association between these variables. The inference from this test is that the higher the level of income the more utilization of PHC

services. This shows that the rural inhabitants, as a result of their low level of the income do not utilize PHC services effectively as those with higher incomes.

This study is in line with Datony (1987) who reported that majority of the people in the lower socio-economic status are not aware of health facilities in areas, let alone use them, and even within this group some of them claim to be aware of such services but lack the financial resources to seek such services

Hypothesis III: There is no Significant Relation between Immunization and Treatment of Maternal and Child Health

Table 5.17: Relationship between Immunization and Treatment of Maternal and Child Health

Variables	N	Mean	S.D	r	Degree freedom	p	r-critic
Immunization	435	1.289	0.454	0.840	433	0,000	0.195
Maternal and child heath	435	1.7862	0.9733				

Source: Computed From Field Data, 2009.

The result of the test in table 5.17 shown that at 0.05 level of significance and at 433 degree of freedom (DF), the argument that there is no significant relationship between minimization and treatment of internal and child health is therefore rejected since the observed correlation coefficient (0.840) is much greater than the critical value of 0.195. In other words there is in fact a significant relationship between the two variables. It then implies that immunization is a significant factor in the treatment of maternal and child health

These findings confirms the previous work of Kuti *et al* (1991) and Bissallah (2003) who reported that immunization is the most feasible and cost effective way of ensuring that

all children and adults enjoy the rights to survival and good health. For example in 1970s small pox was finally eradicated from the surface of the earth through a comprehensive campaign of global immunization with success of small pox eradication, coupled with the fact that an estimated five million were disabled by the six childhood preventable diseases, mostly in developing countries, the WHO/UNICEF established the expand programme on immunization (WHO/UNICEF 2003), this was aimed at reducing morbidity and mortality from all kind of illness.

Hypothesis IV; There is no Significant Relationship Between Distance of the PHC Centre and the Health Care Seekers From Their Homes.

Table 5.18: Relationship Between Distances of The PHC Centre And The Health Care Seekers From Home.

Variables	N	**Mean**	S.D	**r**	**Degree of freedom**	p	r-**critical**
Distance	435	2.8966	1.5333	0.841	433	0.000	0.195
Health seekers	435	1.4299	0.4956				

Source: Computed From Field Survey Data, 2009.

The rank correlation test statistics above in table 5.18 shows thata relationship exists between distance of the PHC service centres and the health seekers from their homes. The table shows that correlation coefficient value (0.841) at 433 degrees of freedom and at 0.05 level of significance is more than the critical value of 0.195. It implies that the null hypothesis (Ho) which states that there is no significant relationship between distance of the health care centre and the health care seekers from their homes is therefore rejected, but the alternative hypothesis is retained implying that there is a significant relationship between the two variables.

This test affirm the ascertain that health care services centres and facilities should be ideally located in other to maintain some sort of special equilibrium that is, the balance that

exist between the location of services and facilities in a place and the health care seekers (Morrill, 1994). This then encourages maximum utilization of services provided and saves time for other productive undertakings. It also implies that the decline in demand for health services due to cost of transport thus define the maximum range and effective health care services provided. This range or distance will vary greatly from the close range for most constantly sort health services to the further distance for those rarely demanded, that is PHC services to referral health care services.

CHAPTER SIX

AVAILABILITY OF HEALTH CARE SERVICES

6.1 Introduction

Health care services include drugs, finance, furniture, vehicles, storage facilities, light, portable drinking water, machines, good roads, health buildings as well as the health care personnel (Kuti *et al*, 1991). These facilities are used by the LGA to provide routine services to the people on morbidity, child welfare services, maternal services, family planning, health and nutrition education, immunization as well as community mobilization. The aim of providing these faculties are to provide health for all, particularly those in greatest need such as children, expectant mothers as well as the elderly and mental people. Availability of health care services in all the PHC centres is therefore crucial for the success of PHC delivery system.

In other to assess the impact of PHC system in the study area, various PHC centres were visited in order to substantiate the finding as analysed from the questionnaire. In all, information could only be obtained from ten (10) out of 27 PHC centres. They include:

PHC Kampani Zango
PHC Mararaba Jos
PHC Farakwai
PHC Igabi
PHC Mando
PHC Rigachikun
Comprenhensive health care (CHC) Jaji
PHC Zangon Aya
PHC Rigasa

Al- Amin clinic and hospital, mararaba Jos. The hospital records gathered were analysed based on the nature of the health care delivery services provided to the people in the study area.

6.2 Number of Patients Treated Daily

Hospital or clinic attendance could be influenced by of quality of treatment, accessibility, interpersonal relationship between providers and clients, patient's satisfaction, continuity of care, income and educational level and dedication of health staff to duty as well as the physical appearance of hospital facilities, their cleanliness, comfort and privacy by daily attendance of patients to PHC centres.

Table 6.1 Average Daily Attendance at PHC Centres.

PHC	**Number of Attendance**	**Percentage**
Kampani Zango	10	4.0
Mararaba Jos	14	5.5
Farakwai	19	7.5
Igabi	20	7.9
Mando	29	11.5
Rigachikun	39	15.4
Jaji	40	15.8
Zango Aya	30	11.8
Rigasa	23	9.1
Al-Amin clinc	29	11.5
Total	**253**	**100.0**

Source: Hospital records, 2009

Table 6.1 shows the distribution of PHC centres by daily attendance of patients. It shows that out of the ten (10) selected PHC centres in the study area, 51.8percent of all the patients are treated in six four (4) PHC centres.

Judging from these records, it is clear that the daily attendance of patients to the PHC facilities in the study area is low, considering the high incidence of mortality and morbidity rates in the study area. This could be partly because of lack of good transportation to facility centres, high cost of treatment and long distances from home to

facility centres, which also add to the cost of treatment(see Table 5.9). Other reasons include poverty and low level of education as well as cultural beliefs as identified by Harrison (1978) in Zaria.

6.3 Types of Illness Treated

Table 6.2 shows the distribution of patients by type of illness treated. It shows that 40.2percent of all the patients treated in the ten PHC centres suffered from malaria fever. This is followed by pregnancy related illness (hemorrhage, sepsis, induced abortions) and typhoid fever which account for 14.2percent and 12.6percent respectively. Other illnesses such as diarrhea and tuberculosis diseases, Account for 8.3 percent each, while cough and measles have 5.5percent and 3.4percent respectively. Sexually transmitted diseases/Sexually transmitted infections (STDs/STLs represent 3.9percent percent and poliomyelitis account for 0.1 percent. Other diseases such as cerebrospinal meningitis, hepatitis, dracuncuhasis, onchocerciasis accident cases body pains account for 3.1 pecrent.

Table 6.2 Number of Patients Treated at PHC Centres by Type of Illness (2007-2008

Type of illness	**Number of patients**	**Parentage**
Malaria	5830	40.2
Pregnancy illness	2050	14.2
Typhoid	1820	12.6
Diarrhea	1200	8.3
Tuberculosis	1200	5.5
Cough	800	3.4
Measles	500	3.9
Carchia problems	60	0.4
Poliomyelitis	20	0.1
Others	450	3.1
Total	**14480**	**100.0**

Source: Hospital Records, 2009

From the data presented above, we can conclude that malaria fever has strong hole in the study area. This agrees with an earlier study where malaria was described as a major health problem and indeed a cause and consequence of underdevelopment in sub-saharan

Africa (FMOH, 2005), and in Nigeria, under five children have up to 3-4 episodes while 50 percent of adults have the illness at least once in a year, leading to loss of up to 300,000 lives annually (FMOH, 2005).

The study further considers whether health care facilities provided to the PHC centres is sufficient for the smooth operation and treatment of these illnesses. In depth interviews conducted with health care staff revealed that the relevant authorities do not provide sufficient facilities to the health care centres. They attributed this to poor management, corruption, poor funding, lack of political will as well as lack of social services in most of the health care centres. Datony (1988), Massoud (2007) in the earlier studies confirmed this assertion.

6.4 Referral Services

Referral is the key component of a health facility centre. The health care in its role as the first contact point of the community with the formal health system serves as the gatekeeper for the higher levels of health care.

FGDs and in-depth interviews with health workers reveal that referral services can take place under the following conditions:

(i) When a patient needs expert advice/attention;

(ii) When a patient requires technical examination that is not available at the health centre;

(iii) When a patient requires technical information that is beyond the health care centre;

(iv) When a patient requires a protracted in- patient care and;

(v) When a patient request for referral or transfer to another facility.

According to the coordinator of PHC Igabi LGA, referral has the following advantage

> "*Referral provides effective linkage with the facility, ensures continuity of care, provides relevant information to the health care worker who is in a position to explain the patient's condition to his family and allay their fears and assist in updating the health worker on the treatment provided in the health care centre and the facilities available so that he/she is in a better position to inform local people on the health care that is available for the general populace." (Hassan Tanimu)*

Table 6.3: Record showing Referral Cases of Patients by PHC Centres

PHC centre	**Number of cases**	**Percentage**
Kampani Zango	100	11.0
Maraba Jos	42	8.9
Farakwai	52	5.8
Igabi	124	13.5
Mando	80	8.7
Rigachikun	90	9.8
Jaji	132	14.4
Zango Ayo	96	10.5
Rigasa	110	12.0
Al-Amin clinc	50	5.4
Total	**916**	**100.0**

Source: Hospital Records, 2009

Table 6.3 shows the distribution of patients by referral cases. About total of 11.0 percent, 8.9 percent and 5.8percent of the patient are referred to other care facilities in the study area by Kampani Zango ,Mararaba Jos, and Farakwai PHC centres respectively, while Igabi PHC centre refers 13.5 percent of the patients. The table shows that 8.7 percent, 9.8 percent and 14.4 percent of the patients are referred to other health care facilities by Mando,Rigackikun, and Jaji PHC centres respectively. Zango Aya and Rigasa PHC centres represents 10.5 percent and 12.0 percent respectively of all the cases in area, while Al-Amin clinc referred 5.4 percent of patients. These patients are usually referred to Ahmadu Bello University Teaching Hospital (ABUTH) Hajia Gambo Suwaba General

Hospital Kofan Gaya, Zaria. In some cases patients are referred to Military Recreation Services (MRS) Jaji and the Armed Forces Reference Hospital, Kawa-Kaduna. The types of cases that are usually referred to these hospitals include; cardia problems, tubeculosis, complicated deliveries and abortions, hepatitis, serious accident cases, lymphatic filariasis and diabetes and food poisoning. The selected PHC centres was carried out by six (6) PHC facilities, while 42.3 percent of the patients are referred by four (4) PHC centres to higher facilities.

The study therefore gives conclusive evidence that patients are always referred to other health care facilities in the study area. Through PHC centres lacked adequate experts, equipments, drugs, admission beds, poor state of hospital facilities and lack of proper information about the patient's illness by the health care personnel. This finding confirms earlier findings by Kuti et al (ibid) who stressed that as PHC delivery system is an integral part of the existing health care system, a workable referral system in all the health care system in the country must be maintained.

6.5 Availability of Health Care Personnel at PHC Centres

Table 4.4 shows the distribution of hospitals by number of health care personnel. It shows that 3.4 percent and 5.7 percent of health care personnel are staff of PHC centres Kampani and Mararaba Jos respectively, while 4.5 percent are staff of PHC Frakwai,Igabi ,Mando,Rigachukun ad Jaji PHC centres account for 3.4 percent, 11.4 perecent , 10.2 percent and 18.2 percent each of the personnel are in Zango Aya and Rigasa PHC centres, while 22.7 percent of the personnel are working in Al Amin clinic.

Table 6.4 Distribution by Number of Health Care Personnel per PHC Centre

Health centre	Number	Percentage
Kampani Zango	3	3.4
Mararaba Jos	5	5.7
Farakwai	4	4.5
Igabi	3	3.4
Mando	10	11.4
Rigachikun	9	10.2
Jaji	16	18.1
Zango Aya	9	10.2
Igasa	9	10.2
Al-Amin clinc	20	22.7
Total	**88**	**100.0**

Source: Hospital Records, 2007-2009

From the table 6.4, shows the distribution of hospitals by number of health car personnel. On the whole, 77.3 percent of all the health care staff are employee of the local government, and mostly found in the rural areas, while 22.7percent are staff of the private clinics and hospitals.

From the above table, it is obvious that PHC centres are facing serious shortage of personnel in the study area. This situation is confirmed by findings from Bisallah (2002), stated that most of the health care centres in Nigeria today suffer a dearth of medical personnel, and this situation is worsened at the local government level, as most of them do not have medical record staff and laboratory technicians.

6.6 Cadres of Health Care Personnel at PHC

There are various cadres of workers involved in health car delivery system. They can be found in any of the three levels of health care in Nigeria. They include the physicians, nurses and mid-wives, environmental health workers, pharmacist, laboratory technicians, record clerks, community health extention workers (CHEWs) etc. also include among the workers are clerks, cleaners, security men and drivers.

Whatever the cadre or level at which any health worker is operating, they all have one primary objective and that is to improve the health of the members of the community to which they have been posted. This implies that, health workers must work as a team in other to achieve this objective.

Table 6.5: Distribution of Health Care Personnel by Cadres

PHC	No of doctors	Nurses/mid-wives	Matron	Pharmacist	CHEW	Medical record staff	Lab. Scientist	Others	Total	percentage
Kampai ZANGO	-	-	-	-	3	-		-	3	3.4
Mararaba Jos	-	1	-	-	3	-		1	5	5.7
Farakwai	-	1	-	-	2	-		1	4	4.5
Igabi	-	1	-	-	2	-		-	3	3.4
Mando	-	1	1	-	5	-	1	2	10	11.4
Rigachikun	-	2	1	-	3	-	1	2	9	10.2
Jaji	1	2	1	1	4	2	1	4	16	18.2
Zango Aya	-	2	1	-	2	1	1	2	9	10.2
Rigasa	-	3	1	-	3	1	-	1	9	10.2
Al-Amin clinc	1	3	3	1	7	2	1	2	20	22.8
Total	**2**	**16**	**8**	**2**	**34**	**6**	**5**	**15**	**88**	**100.0**

Source: Hospital Records, 2009

Table 6.5 shows the distribution of health care personnel by status. It shows that out of 88 health care personnel from the ten (10) selected PHC centres in the study area 3.4 percent are found in PHC centre Kampani Zango, while 5.7 percent, 4.5 percent and 3.4 percent are in PHC Centres mararaba Jos, Farakwai ad Igabi respectively. The table shows that 11.4 percent and 10.2 percent of the health care personnel are found in PHC Centres Mando and Rigachikun in that order. A significant proportion 918.2 percent) of the health care workers are in PHC Jaji, while the PHC Centres Zangon Aya and Rigasa amount to 10.2 percent each, and Al-Amin Clinic represent 22.8 percent of the proportion.

From this analysis, it is quite obvious that there is acute shortage of health care staff especially physicians and pharmacists in the study area. This agrees with earlier studies by Datong (1988); Kuti *et al* (1991) and Iliyasu (2002) where shortage of health personnel especially physicians was reported as one of the major problem affecting the implementation of the PHC delivery system, especially in the rural communities.

6.7 Sources of Funding

Funding the health services at the local government level is a joint responsibility of the three- tiers of government. The national Health Policy 9NHP) provided that federal and state government shall review their allocation being accorded to the PHC with particular reference to the disadvantaged sector of the population (FMOH, 2007)

Considering the importance of funds in the implementation of PHC system, Hospital Records were studied from ten (10) PHC centres in the study

area from 2004-2009. The PHC centres include, Kampani Zango, Mararaba Jos, Farakwai, Igabi, Mando, Rigachikun Jaji, Zangon Aya, Rigasa and Al-Amin clinic. The records shows that Igabi LGA provide about 70.0 percent of the funds needed for running of the PHC centres. This is in line with the NHP which stipulates that LGAS has constitutionally defined responsibilities for the provision of Services financed by locally generated revenues. (FMOH, 2009). The records further shows that state and federal governments contribute 20.0 percent and 10.0 percent respectively.

There are other donor agencies that offer both financial and technical assistance to the LGA in matters relating to PHC services. These agencies include:

- United Nations Agencies such as WHO, UNICEF, United Nations Fund for Population Activities (UNIFPA), Food and Agricultural Organization (FAO) and United Nations Development Programme (UNDP).
- Bilateral Agencies Such as United States Agency for International Development (USAID), International Planned Parenthood Federation (IPPF) and Path Finder of Boston.
- Non- Governmental Organization (NGOs) Such as Rotary International (RI), Red Cross society, Christian Health Association of Nigeria (CHAN) and Muslim.
- Private organizations such as Ford and Cater Foundations
- Individuals and communities also offer assistance through labour and materials

From the in-depth interview, the following statement was made by the medical officer in charge of PHC centre Kampani-Zango:

> *"Communities and individuals contribute in the running of PHC activities through the provision of free accommodation to our staff, construction of feeder roads and wells through self-help project and ion same cases provide free drugs for the centre" (Mallam Muhammed Zango' Aya).*

Igabi LGA, like any other LGA in Nigeria, realized its funds from its services (including health) through internal revenues and statutory financial allocations. The health department runs its services under the provision of the National Health Policy (NHP) which is based on PHC. Over the years, that is from 2004-2009 the health department has witnessed a declining share of total budgetary allocation from the LGA as table 6.7 indicates.

Table 6.6: Budgetary Allocations to Igabi LGA 2004-2009

Year	**Actual Budget Allocation (₦)**	**Allocation for Health (₦)**	**Percentage**
2004	1,033,386,373	91,407,951	8.8
2005	1,202,238,827	84,481,884	5.4
2006	1,812,385,822	89,278,335	5.0
2007	1,967,809,513	104,051,230	5.3
2008	3,295,122,700	224,351,679	6.8
2009	3,145,893,645	64,600,000	2.1
Total	**12,456,836,888**	**638,171,079**	

Source Revenue Department, Igabi LGA, 2009

From table 6.7 the year 2004 the health sector received ₦91,407,591:00 out of ₦1,033,386,373:00 which translates to 8.8 percent. In 2005, the approved budget for the health sector was ₦84, 481,884.00 for the LGA. In 2006, the health

sector received N89, 278,335:00 out of total budget of N1, 812,385,822:00 for the LGA. This represents 5.0 percent of the total spending for the year. In 2007 and 2008, the health sector received ₦104,051,230:00 and ₦224,351,679 out of a total budget of ₦1,967,809,513:00 and ₦3,295,122,700:00 which represents 5.3 percent and 6.8 percent respectively for the LGA, while in 2009, the approved budget for the health sector was N64,600,000:00, representing 2.1 percent of the total budget of N3,145,893,645:00.

In absolute terms these figures represents a marked decrease in budgetary allocation for the health sector over the years. From table 6.1 and Table 6.7, it is quite clear that PHC facilities are not adequately funded in the study area. Lack of adequate funding of PHC centres have always been used to explain the ineffectiveness of the health sector in Nigeria (Massoud , 2007).

6.8 Logistic Services

Logistic in this study means the practical organization that is needed to make PHC plans and activities work and be successful. They include the availability ambulances, motorcycles, X-ray machines, screening equipment, generators, and cold boxes

Logistic services are the bed rock of PHC implementation because they are the physical materials which the health care personnel handle directly in the process of hospital ministration.

Table 6.7: Hospital Record Showing logistic Services 2007-2009

PHC	Wards	Motorcycle	Ambulance	X-rays machine	Generators	Fridge/ freezers	Cold boxes	Bore hole	Screening machine	Total	Percentage
Kampai ZANGO	-	-	-	-	-	-	1	1	-	2	2.9
Mararaba Jos	-	-	-	-	-	1	1	1	-	4	5.8
Farakwai	-	-	-	-	-	-	1	1	-	2	2.9
Igabi	-	-	-	-	1	1	1	1	-	4	5.8
Mando	1	-	-	-	1	1	3	1	-	8	11.6
Rigachikun	1	1	-	-	1	1	3	1	1	9	13.0
Jaji	2	1	1	-	1	1	4	1	1	12	13.4
Zango Aya	1	-	-	-	1	1	3	1	-	7	10.1
Rigasa	1	1	1	-	1	1	2	1	-	8	11.6
Al-Amin clinc	3	1	1	1	1	1	3	1	1	13	18.8
Total	**9**	**4**	**3**	**1**	**8**	**8**	**22**	**10**	**4**	**69**	**100.0**

Source: Hospital Records, 2007-2009

Table 6.8 shows the distribution of health care centres by logistic services. It shows that PHC centre Kampani has one each of cold box and bore hole, which represent 2.9 percent of the logistic services in the area. About 5.8 percent, 2.9 percent and 5.8 percent of logistic services are found in Mararaba Jos, Farakwai and Igabi PHC centres in that order, while 11.6 percent, 13.0 percent and 13.4 percent are found in Mando, Rigackikun and Jaji PHC centres respectively .The Table shows that 10.1 percent and 11.6 percent of the logistic services are found in Zangon Aya and Rigasa PHC centres respectively, while 18.8 percent of the proportion are found in Al- Amin Clinc

This finding reveals that there is a serious logistic problem in the study area. From the in-depth interview, the co-odinator of PHC services, Igabi LGA stated that:

> "*logistic problems include; shortage of drugs, poor road net-work, difficult terrain, poor state of infrastructures, lack of screening machines, lack of clinical temperatures* and shortage of vaccines."

This study agrees with Katung (1997), Obionu (2007) who reported that inadequate infrastructural facilities and logistic support like absence or insufficiency of water supply, electricity, poor drainage, essential equipment and insufficient staff quarters in the hospital vicinity are some of the problems of health care delivery system in Nigeria, especially in the rural areas.

6.9 Community Contributions to PHC Implementations

The Alma-Ata declaration was very clear about the indispensable role of community participation in PHC delivery system. Massoud (2007) has shown that individuals and communities need to be informed, educated, motivated formally

and informally involved in health care programmes because it enables the people to be aware of their own potential contributions to health care development

Because community participation is an important part of PHC activities, collecting information on how the communities contribute positively to successful health care delivery system is paramount.

According to the community health officers(CHOs) in-charge of Kampani Zango, Mararaba Jos, Farakwai and Igabi PHC centres the contributions of the communities in these facilities is enormous, and this include the construction and maintenances of feeder roads in their respective areas. For example, in 1988 a feeder road was constructed from Lamba Zango to Zangon Aya village where the PHC centres is located, and since then the community has been maintaining the roads through community efforts. Also the health officers reveal that open wells has been constructed by the community to provide portable drinking water at PHC centres, involved in monthly environmental cleaning and the provision of the services of security men for the PHC centres.

At the Mando, Rigachikun, Rigasa and Jaji PHC centtres, the CHOs also reveal that communities in these areas form village health committee, who mobilize and sentizes the local people about the need for total involvement in health care programmes, held regular meetings to discuss problems such as protection of medical facilities against vandalization, support and maintain drug revolving fund and help in reporting any case of outbreak of epidemics. Another important contribution of these communities is the provision of free accommodation to health care staff.

At Zangon Aya PHC centre and Al-Amin clinic, the level of community participation is high. According to the CHO in-charge of Zangon Aya PHC centres, there is education committee in the area, and one of their functions is to sentize and educate the local people on how to improve their health status. Also the community has constructed a feeder road from Zangon Aya to Kadauji village to link the premises of the PHC centre, and this is through the effort of the community.

In all the PHC centres visited all the medical officers in-charge did not mention financial contributions of the communities because going through their records, they have not received any fund either from individuals or groups. However, the communities in all these facilities organize evening and weekly markets to improve socio-economic activities of the people.

Also, during the in-depth interview with the LGA PHC coordinator, he stressed that:

> "*community participation in PHC activities ranges from the provision of medical supplies and essential drugs, provision of housing to health care staff, to the formation of community health committees, monthly meetings with youths, women groups and NGOs to discuss their health problem and enlighten them on health issues and providing voluntary work like guards for some of the health facilities"*. (Tanimu Hassan)

This findings agrees with Kuti *et al* (1994) who stated that many communities in Nigeria has contributed immensely in PHC programmes through the construction of feeder roads ,provision of motorcycles, and bicycles to community health workers, construction of wells and local markets to improve the socio-economic wellbeing of the people in their areas.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.1 Summary

The phrase health for all by the year 2000 and beyond as proclaimed by WHO/UNICEF in Alma-Ata, Russia is a call for equity in the health care delivery system, and recognized PHC as the key to achieving a state of physical, mental and social well being for all the people of the world. PHC delivery system is aimed at providing general health care services of preventive, curative, promotive and rehabilitative services to the entire people of the world.

The studies reveal the impact of PHC delivery system in Igabi LGA of Kaduna state. It also focused on the nature and type of existing health care facilities present in the study area, assessing the major causes of ill health and the resources available for the running of the programme. The study examined the relevant contributions of the community to the PHC progranmme and assessed the impact of PHC programme on the well being of the people in the area.

From the results, majority of the respondents fall between the age brackets of 20-49 years. In terms of gender, 53.1percent and 46.9 percent of the total respondents are males and females respectively. On the average the level of education in the area is high, implying that the awareness on health related issues is also high. Total fertility rate (TFR) is also high with 52.0 percent of the respondents have ever born between seven children and above, while 76.8 percent of household have between five to fifteen (5-15) persons in their homes, implying

that there is overcrowding in many houses in the area, and which may lead to outbreak of communicable diseases.

Health indicators like infant, child and maternal mortality is high with a proportion of 80.2 percent indicating that between one to nine (1-9) of their children died before the age of two years, 88.3 percent also indicate that at least one to six (1-6) children and above have died between the age bracket of three to five (3-5) years and 64.1 percent of the respondents indicate that their friends and relatives died from pregnancy and childbirth respectively. Reasons for this are due to untimely decisions to seek for health care services especially on pregnancy and childbirth related illness, usually influenced by mother in-laws and husbands.

The study also revealed that there are good number and types of PHC centres, (see Table 5.2), but the patronage is very how due to the effects of distance to health care facility centres, which also add cost on the treatment received long waiting hours at facility centres, and also the unfriendly attitude of some of the healthcare personnel discourage many patients from visiting the facilities.

Malaria fever was also identified as the principal causes of ill health and death in the area, with a proportion of about 45.0 percent and this is followed by typhoid fever.

There is evidence from the study that referral concept of health care management is high where there is chronic condition beyond the facility centres. There is also evidence that the community participation in PHC programme is quite low with a proportion of 59.5percent of the respondents who have never contributed towards PHC activities.

The PHC system in the area is confronted with so many problems such as inadequate personnel, facilities and poor logistics for example, the LGA has no single ambulance. Funding of the PHC system in the LGA is inadequate for example, from 2004-2009 the local government budget over these years was about N12.5 billion and out of this amount only N 638.2 million was allocated for health care services representing 5.0 percent

Immunization is constantly held in the area, but it is yet to reach the 1990 WHO/UNICEF level of 90 percent coverage (Bisallah, 2002). However, PHC programme has significantly contributed to the development of the entire community with about 50.0 percent impact on increased standard of living. The Rank correlation test reveals that there is a significant relationship between background characteristics of respondents and PHC system

7.2 Conclusion

The study provides a good representation of PHC programme in Nigeria and Kaduna state particular. The failure to provide an efficient, functional and sustainable health care system has led to a situation where access to health care is no longer a right for the majority of the populace as proclaimed by the WHO/UNICEF in 1978, but as a privilege. PHC has failed in the study area because there was no serious interaction between formal management structures and local resident. This led to absence of local mechanisms for ensuring adequate financial allocation to the PHC centres.

Because the local communities were not allowed to take full charge of their own health (lack of community participation), in policy making and implementation

with regards to PHC delivery system in the area, they did not see formal management structures in the area as particularly relevant to their existence.

The operation of the PHC programmes at the facility level staggers so much that it has became too per functioning to invoke receptivity from the community. A couple of scintillating facts brought out by the analysis shows that the impact made by the PHC programme on the general health conditions of the people is very insignificant. These facts include; inadequate personnel, expensive nature of drugs, lack of location of many centres within reasonable distance, inadequate infrastructural facilities and logistic support and high rate of infant, child and maternal mortality in the area. As a result the facilities available in the LGA can only offer out patient treatment, rudiment antenatal care services and occasional vaccination. The quality of services what ever offered has been deteriorated so much that the beneficiaries prefer to seek medical care outside the facility centres through referral or seek for alternative non- PHC agencies or visit quacks.

7.3 Recommendations

In any society only an initiative which demands community involvement and makes the community ultimately responsible for its own health has any chance of success. Health policies and technologies must also include respect for peoples culture and traditions all this implies that any proposed solutions must be understood and accepted by the people whom it is meant for and that must overcome the immediate problems of all health related diseases and more importantly it must provide preventive measures and technological level such that the rural peoples are able to solve problems of poor health (WHO/UNICEF 2009).

The principles underlying the operation of PHC system requires community participation. Communities are to be encouraged, motivated and inspired to take care of their needs and priorities. Their active partnership with health care facilitators and other sectoral professionals would ensure necessary support and enhance their self reliance, self determination and self help. The health care provider should have adequate knowledge of what the people actually need. Lengthy sermon and advice on the virtues of self help may fall flat and people may turn truant as this approach may not appeal to their perception on the health providers. The health worker, taking note of the economic hardship should teach the villagers ways and means for improving their self reliant and self sufficient with the help of inter-sectoral collaboration. The question of maintaining their health will appeal to them after they are assured of their mortal existence. The health care provider therefore is to inspire people to take care of their own health.

Seen in this perspective the following recommendations are offered.

- Consistency and continuity must be maintained. To ensure consistency and continuity unaffected by any change either of personnel in authority or administrative officer, an independent advisory committee composed of professionals, public spirited social workers, state government officials and community representatives should be constituted to advise, overview, monitor and evaluate PHC system of the LGA and their decisions should be obligatory to the LGA in matters of implementing the overall policy and programme of PHC as outlined in the National Health Policy (NHP) of the federal government.

- The LGA should take appropriate means to assess the needs of the community and formulate required strategy to improve the coverage in terms of beneficiary and also in terms of programme contents based on the essential elements of PHC and this will include the formation of health committees in the villages, consisting of local leaders to authorize them to take active part in assessing needs of and imparting health education to the community so as to enable them to identify their health problems and also help to open new facilities, strengthening and upgrading the existing facilities and further extending gradually the programme coverage to include as many essential elements of services as possible for each facility to meet the demand likely to be generated.
- Improvement in the quality of services stimulates acceptability so far as they felt needs are concerned. In this the LGA should adhered to the policies of employing qualified staff with adequate incentives to motivate them for their dedicated services. There should be at least one medically qualified staff member to each facility centre, in this case manpower development which will offer training opportunities to the employed staff members and encourage their attendance in seminars and workshops to improve their knowledge and skills.
- To have public confidence and credibility, it is necessary that authorities should have transparency and accountability in their financial dealing in receipt and expenditure. Yearly audited statement of accounts is needed and every services provided should be recorded with necessary details so

as to justify the allocated resources. Adequate documentation of the inventory of all goods and items purchase and equipment and records of consumables which should be subject to periodic check up and stock taking.

- Use of regular report of communicable diseases should be applied by the government to minimize outbreaks of diseases such as cholera, meningitis, measles, dysentery etc. Action should be taken to analyze and interpret incidence of epidemic diseases regularly in other to develop a warning system.
- Environmental health services are an integral part of the PHC services of any community. Its success or failure depends on how effective the entire system is organized and integrated toward achieving a common goal. The practice where local government isolates its environmental health activities from other PHC activities at facility and community levels leaves a lot to be addressed. The government must quickly review its current approach, devise a strategy to get environmental health services fully integrated with other PHC system. Environmental health staff should form a part of the PHC team at facilities and communities.
- Intensive enlightenment and mobilization campaign should be mounted by the health departments and because the mass media is the most effective and efficient source of information dissemination about health care matters, it should be expanded to have a wider coverage. Above all, whilst our value systems and socio economic conditions differs, the

government might profitably examine china, Cuba and Tanzania methods and progress towards solving her health care problems.

7.4 Recommendation for Further Research.

* Because of time, financial and other resources constraints, this study has not been able to make in-depth studies into the socio-economic status of the people in the LGA.
* Over the years, Nigeria witnessed a series of epidemic of communicable diseases such as cholera, meningitis, tuberculosis, measles, dysentery and malaria. Seriousness of these epidemics and level of causalities could have been minimised had there been in-depth study of these diseases to foresee the outbreak in advance.
* Research work on PHC system need to be done and consider disease in relation to the environment, nutrition, sanitation, maternal and child health.

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APPENDIX A

DEPARTMENT OF GEOGRAPHY, FCULTY OF SCIENCE AHMADU BELLO UNIVERSITY, ZARIA.

Dear Sir/Madam,

This questionnaire is design as part of an M.Sc research on the topic "AN ASSEISSMENT OF THE IMPACT OF PRIMARY HEALTH CARE DELIVERY SYSTEM IN IGABI LGA" It is purely an academic work data and all information this work will treated with all confidence as no name or any information that will reveal the identity of any respondent will be used. Your response will help in designing sustainable programme on primary Health Care Delivery System in Igabi L.G.A.

SECTION A

DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF RESPONDENT

1. Age: (a) ( ) (b) 15-19 ( ) (c) 25 – 29 ( ) (e) 30-34 ( )
   (f) 35 – 39 (g) 40-44 ( ) (h) 45-49 ( ) (i) 50-54 ( )
   (j) 55-59 (k) 60 ( )
2. Sex: (i) Male ( ) (ii) Female( )
3. Ethnic group: (a) Hausa ( ) (b) Igbo ( ) (c) Yoruba ( )
   (d) Southern Kaduna ( ) (e) Others (Specify)_____
4. Religion: (a) Christianity ( ) (b) Islam ( ) (c) Tradition/Pagan ( )
5. Level of education: (a) None ( ) (b) Koranic ( ) (c) Primary ( )
   (d) Secondary ( ) (e) Tertiary ( ) (f) Others (Specify)_____

6. Marital Status: (a) Single ( ) (b) Married ( ) (c) Separated ( )

(d) Divorced ( ) (e) Widowed/Widower ( )

7. Age at first Marriage: (a) 10-14 ( ) (b) 15 -19 ( ) (c) 20-24 ( )

(d) 25 – 29 ( ) (e) 30 – 34 ( ) (f) 35+ ( )

8. Type of marital union: (a) Monogamy ( ) (b) Polygamy ( )

9. Number of years in marital union: (a) 1-2 years ( ) (b) 3-4 years ( )

(c) 5-6 years ( ) (d) 7-8 years ( ) (e) 9-10 years ( )

(f) 10 years and above ( )

10. If in polygamous union, how many wives do you have?

(Males only) (a) 2 ( ) (b) 3 ( ) (c) 4 ( ) (d) 5 and above

11 If in polygamous union, how many of you are married to your

Husband? *woman only) (a) 2 ( ) (b) 3 ( ) (c) 4 ( )

(d) 5 and above.

12. Number of children ever born: (a) None ( ) (b) 1-2 ( )

(c) 3-4 ( ) (d) 5-6 ( ) (e) 7-8 ( ) (f) 9-10 ( ) (g) Above 10 ( )

13. Do you have any gainful employment? (a) Yes ( ) (b) No ( )

14. If yes above, what is the type of employment? (a) Farming ( ) (b)

Civil Servant ( ) (c) Full House Wife ( ) (d) Business/Petty trading

( ) (e) Student ( ) (f) Unemployed ( )

(g) Others (Specify)_____

15. What is your income per month? (a) N500 – 900 ( )

(b) N10, 000 – 14,000 ( ) (c) N15, 000 – 19,000 ( )

(d) N20, 000-24,000 ( ) (d) Above N25, 000 ( )

16. What type of accommodation do you have? (One room ( )

(b) Two rooms ( ) (c) Flat/Bungalow ( ) (d) Duplex ( )

17. Ownership of accommodation: (a) Official ( ) (b) Rented ( )

(c) Owned ( ) (d) Squatting ( ) (e) Others ( )

(Specify)_____

18. How many people are currently living in your house?

(a) 1-5 ( ) (b) 6-10 ( ) (c) 11-15 ( ) (d) Above 15 ( )

19. How many of your children have died before the age of Two years?

(a) None ( ) (b) 1-3 ( ) (c) 3-5 ( ) (d) 6-9 ( ) (e) above 10 ( )

20. How many of your children have died between the age of 3 – 5 years?

(a) None ( ) (b) 1-3 ( ) (c) 4-6 ( ) (d) Above 6 ( )

21. If you are widowed, what was the cause of your husband/wive's

Death? (a) Accident ( ) (b) When giving birth ( )

(d) Others (specify)

SECTION B

AVAILABILITY OF HEALTH CARE SERVICES

22. Is there any health care centre in your place? (a) Yes ( ) (b) No ( )

23. If yes in above, what type is it? (a) Dispensary ( ) (b) clinic ( )

(c) Specialist hospital ( ) (d) General hospital ( )

(e) Herbal/Traditional Home ( ) (f) Others (Specify)_____

24. Is there any Primary Health Care Centre in your area?

(a) Yes ( ) (b) No ( )

25. If yes above, how far is it from your home? (a) Less than 2 km ( )

(b) 2-4km ( ) (c) 5-7km ( ) (d) 8-10km ( ) (e) 11-13 km ( )

(f)14 – 16 km ( ) (g) above 17 km ( )

26 When the need arises, which of the following means of transport do you use to the health care centre? (a) on foot ( )

(b) By motorcycle ( ) (c) By car/bus ( ) (d) Others (Specify)_____

27. If "On foot" it is because (a) There is no motor to the area ( )

(b) Too near to the health centre ( )

(c) Vehicles visit the area once in a week ( )

(d) Roads become very muddy in the rainy season for vehicles ( )

28. If the nearest health care centre in your area is a dispensary, how far is the general hospital from your house (a) 0-10 km ( ) (b) 11-30 km ( ) (c) 31-50 km ( ) (d) 51-70 km ( ) (e) 71-90km (f) Above 91 km ( )

29. From your own point of view is the general hospital location Convenient? (a) Yes ( ) (b) No ( )

30. Have you ever visited a Primary Health Care (PHC) Centre?

(a) Yes ( ) (b) No ( )

31. If yes in (30 above, what took you there? (a) For treatment ( )

(b) For consultation ( ) (c) For delivery ( ) (d) For antenatal ( )

(e) For counseling (f) Others (Specify)_____

32. What kind of illness do you normally take to the primary health care centre? (Specify)_____

33. Did you receive prompt attention at the primary health care centre?

(a) Yes ( ) (b) No ( )

34. If no in (33) above, why?_____

35. Is the health care centre capable of treating the illness you reported?

(a) Yes ( ) (b) No ( )

36. If no in (35) above, why?_____

37. What is your impression on how health workers treat their patients?

(a) Good ( ) (c) Average ( ) (d) Poor ( ) (e) Very poor ( )

38. In your opinion, are the health facilities adequate within the health?

Centre? (a) Yes ( ) (b) No ( )

39. Have you in any way contributed to health care system in your area?

(a) Yes ( ) (b) No. ( )

40. If yes in (39) above, in what way" (a) Financial ( )

(b) Free Labour ( ) (c) Free Drugs ( ) (d) Furniture ( )

(e) Vehicle ( ) (f) Others (Specify)_____

41. Within the last few weeks, did you see any medical personnel for

Check-up? (a) Yes ( ) (b) No ( )

42. If yes in (41) above, are you satisfied with the treatment (a) Yes ( )

(b) No ( )

43. Is there any clinic for pregnant women in your area? (a) Yes ( )

(b) No ( )

44. Have you or any of your relation attended the maternity clinic

(a) Yes ( ) (b) No ( )

45. If no in (44) abov3e it is because (a) There is no money ( )

(b) The clinic is located too far away ( )

(c) There is no need to attend the clinic ( )

(d) It is against my religion ( )

46. Who decides on the treatment you take during pregnancy and childbirth? (Females only) (a) Only you ( )

(b) Only your husband ( ) (c) Your mother in law ( )

47. Did any of your relatives/friends died during pregnancy?

(a) Yes ( ) (b) No ( )

48. If yes above, what was the cause of her death?

(a) Prolong Labour ( ) (b) Miscarriage ( )

(c) Obstructed Labour ( ) (d) Pregnancy induced hypertension ( )

(e) Others (Specify)_____

49. During antenatal days in the hospital, how long does it take? Before you are attended to during each visit? (a) < 30 minutes ( )

(b) 1-2 hrs ( ) (c) 3-4 hrs ( ) (d) 5-6 hrs ( ) (e) 7 hrs + ( )

50. Are there drugs in the hospital/clinic you attend? (a) Yes ( )

(b) No ( )

51. If yes above, how costly are the drugs? (a) Expensive ( )

(b) Moderate ( ) (c) Cheap ( )

52. How has the health care centre contributed to the development of your community? (a) Construction of roads ( )

(b) Provision of infrastructure ( )

(c) Improved standard of living ( )

(d) Others (Specify)_____

53. Do the health care centre provide constant immunization?

(a) Yes ( ) (b) No ( )

54. What is your source of information about new developments in Modern health care delivery?

(a) Friends ( ) (b) Mass media ( ) (c) District head ( )

(d) Government information service ( )

(e) Religious centres ( ) (f) Others (Specify)_____

55. What do you think is the problem of health system in your area?

Briefly explain_____

56. How can these problems be solved?_____

APPENDIX B

FOCUS GROUP DISCUSSION GUIDE
TOPIC: AN ASSESSMENT OF PRIMARY CARE DELIVERY SYSTEMS IN IGABI LGA OF KADUNA STATE.

	General Question	**Probe for business activities**
1	What do you think about the topic that we have all gathered here to discuss on the impact of PHC in Igabi LGA	Probe to find out whether PHC system is Impacting the Lives of people in the area.
2.	What do you think is the Major cause of Ill-health in this area?	Probe to find out the level of awareness on health related issues.
3	How far do you travel from your home before reaching a PHC centre in your area, do you have good roads?	Probe to know whether participants are living within the WHO recommended distance to a health care facility.
4	What is your perception on how health care personnel treat their patients at facility centres? Do health care workers visit you at home?	• Probe to find out the impression patients have on the health workers. • Probe to find out whether there is cordial relationship between patients and health care workers
5	When you visit a PHC centre, how long do you wait before the health care personnel attend to you and why?	Probe to find out the waiting time at facility centres by patients .
6	Do you have a health committee in your community?	Probe to find out the level of community participation in PHC delivery system in the area.
7.	Who takes decision in the family concerning: • Your treatment • Children health/school • Visits and travels • Type of food consumed • Marriage of your children	Probe to find out decision making concerning health issues in the family with regard to: • Treatment during pregnancy and childbirth • Age at marriage • Level of utilization of health are facilities
8.	In what way do your community contribute and support the government in the provision of PHC services in this area?	Probe to find out the level of community contribution/participation in PHC activities in the LGA.