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**URBAN GROWTH AND ACCESS TO HEALTH  
FACILITIES IN ACCRA METROPOLITAN AREA**

**BY**

**MARTIN OTENG-ABABIO**



**A THESIS PRESENTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE AWARD OF MASTER  
OF PHILOSOPHY (M.PHIL) DEGREE IN GEOGRAPHY  
AND RESOURCE DEVELOPMENT, UNIVERSITY OF  
GHANA.**

**AUGUST, 2000**

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## **DEDICATION**

**I dedicate this thesis to the glory of my son, Prince Oteng-Ababio whose peculiar situation inspired me to achieve greater laurels in life.**



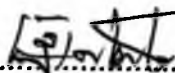
**DECLARATION**

With the exception of references to other works which I have duly acknowledged, I hereby declare that this piece is the result of my own research and that neither in whole nor in part, has this work been presented for the award of another degree elsewhere.

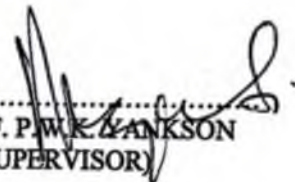
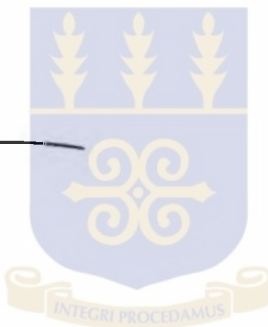


.....  
MARTIN OTENG-ABABIO  
AUGUST 2000

.....  
PROF. JACOB SONGSORE  
(SUPERVISOR)



.....  
PROF. J.S. NABILA  
(SUPERVISOR)



.....  
PROF. P.W.K. ANKSON  
(SUPERVISOR)

## ACKNOWLEDGEMENT

In accordance with convention, I wish to gratefully acknowledge certain debts I incurred in the execution of this research especially the sustained interest shown in the work by lecturers of the Department of Geography and Resource Development. Their collective efforts in addition to the critical and mature guidance demonstrated by my supervisors, Prof. Jacob Songsore, Prof. J.S. Nabila and Prof. P.W.K. Yankson no doubt were the greatest motivating factors that patiently and steadily steered the course of this research. Infact, but for their invaluable suggestions, this study could not have been brought to completion.

I would also like to express my gratitude to Prof. Kwasi Adarkwa of the University of Science and Technology, Kumasi, whose continuous and constructive criticisms complemented the efforts of any supervisors. I cannot also lose sight of the tremendous assistance offered by Andrews Kwaku Amoah, Stephen Oteng Owusu, Susan Oteng and Andrews Kwasi Owusu in my data collection. Mention should also be made of some officials at the Ministry of Health especially, Dr. Sagoe who readily and wholeheartedly made available to me certain data and suggestions which added colour to this study. Many thanks also go to all those officials at the various health institutions visited, public, private and as well as traditional especially Dr. Obuobi Sakyi of Castle Clinic, Dr. Koranteng of the Police Hospital and Dr. Kwarko Jnr. of the North Ridge Hospital for the friendly manner they received me.

I also wish to thankfully acknowledge the fruitful collegiality that I share with my colleagues particularly William Frimpong Bonsu for their invaluable comments and advice. I am also indebted to Mr. Erasmus Achianor of Computer Science department, Legon, for expertly and competently handling the computerization of field data, Mr. Duodu of Geography & Resource Development for expertly preparing all the maps and illustrations and Mrs. Abena Mensah and Mr. William Kwesi Koranteng of Tropical Architects, Accra for expertly organizing and executing the typing of this thesis.

Many thanks to Mr. Justice Oteng of Agricultural Development Bank, Ring Road Branch, for carefully reading through the final script. Finally, many thanks to my loving wife, Mrs. Rita Oteng Ababio whose understanding, co-operation and moral support and encouragement made this apparent long battle come to a successful end. This little piece of work for whatever it is worth, is a monument to them and all those countless friends and technicians especially those that I might have omitted inadvertently but whose sweat and toil have in one way or the other, helped to produce the materials referred to in this study.

With this bit of assistance, any errors and omissions that remain must surely be my responsibility alone.

## ABSTRACT

Ghana, for the last two decades, has been experiencing tremendous surge in urbanization. It is an over simplification to assert that even though in terms of proportions the country is still predominantly rural, its very large total population make the urban proportion sizeable. This apparent large urban population living in urban centres of various sizes have put a tremendous stress on the physical and social infrastructural facilities of these centres.

The stress is even precarious in the country's biggest metropolitan and national capital, Accra, which has attracted the bulk of the migrants from the rural areas who have been thrown into the city in search of non-existent white collar jobs. This over-crowding coupled with inadequate and undeveloped infrastructural facilities have resulted in a precarious health situation, especially for the urban poor. The health care delivery system of the country, to a large extent, has not been specially designed to handle the situation in the urban areas. It has been developed as a national system ignoring the urban-rural differences in the health care demand pattern.

Unfortunately, empirical work to provide information of the extent to which the limited health facilities within the city are being used by the total urban population is lacking. For the government to achieve its health policy as enshrined in the Ghana Vision 2020 policy such information is indispensable. For this deficiency, this study attempts to examine the utilization of health facilities within the Accra Metropolitan Area (A.M.A.) by preparing an inventory of the various health facilities within each of the sub-metropolitan areas.

In order words, attempts are hereby made to determine some of the factors that inhibit access to proper medicare within the metropolitan area. Among the variables that have been investigated as factors influencing the utilization of health facilities, income, education and distance have been found to be most significant. In the case of traditional health facilities, it was particularly realised that utilization has to be looked at in the light of the health care beliefs of the people and the fact that services are generally considered to be more sociable, quick and inexpensive.

This study recommends, among others, the education of the populace to keep to proper environmental sanitation practices as a penacea to the present health problems within the city. More importantly therefore, prevention as against curative health care delivery is being advocated as a way to circumvent the present health hazards facing the city and the country in general.

It is hoped that the study will serve as a 'spring board' for further detailed research and thus provide the necessary information needed for the proper planning and management of health related problems within A.M.A.

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## CHAPTER ONE

### GENERAL INTRODUCTION

#### 1.1 Introduction

It can be argued that the most important philosophy guiding the development of health policy and planning in developing countries during the 1980s was primary health care. Equally important is the fact that most of the discussions and literature on primary health care have been related to rural areas of developing countries and have rarely addressed the problems of the rapidly growing cities. Lipton (1976) argues that typically up to 80 percent of developing countries' national health budget is spent in cities. This he noted is due to the major hospitals of the country being located in the cities and the priority given to, and expensive nature, of tertiary (hospital) care. When examining equity (distributive justice) in health care at the national level, it was often argued that rural areas deserved priority attention due to the inequity of this "urban bias".

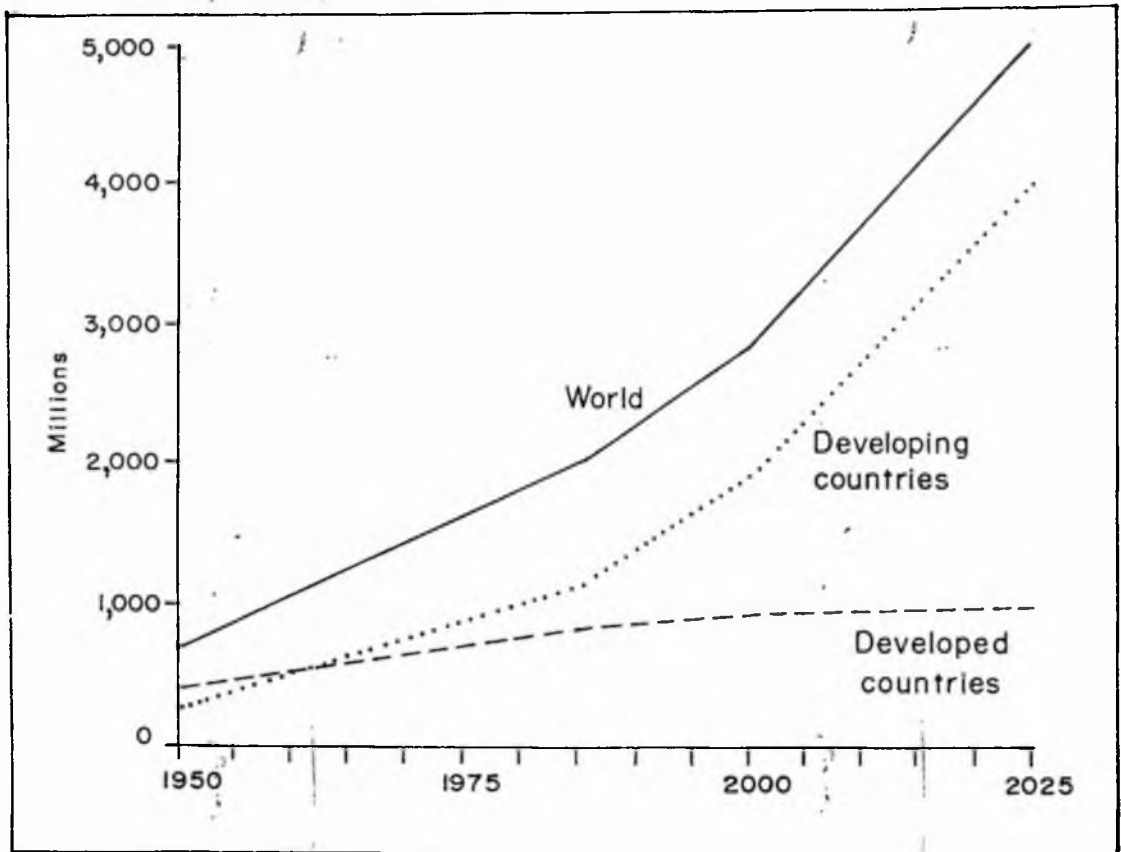
During recent years, however, more attention has been focussed upon equity within Third World cities themselves. It has been recognised that there is an equally urgent need to develop primary health care within cities as there is in rural areas. The rapid rates of urbanization and the associated growth of poor urban populations have prompted health policy-makers and planners to raise questions about appropriate way in which to develop urban primary health care. The problem of improving health care delivery system both in the rural and urban areas has been hampered by the necessary resources to do this.

Health facilities are therefore often geographically inaccessible to the majority of the rural population (Freund 1986; Lasker 1981; McEvers 1980; Stock 1985) as well as the vast majority of the urban poor (Harpham et al 1988; Oni, 1988). Attempts to extend care, however, are generally hampered by shortages of financial and human resources and other barriers (Phillips 1990).

The problem appears more acute in present day cities due to their tremendous increase in urbanization. Urbanization can be defined as the relative increase in the urban population as a proportion of the total population. In fact, urban populations have greatly increased in the last forty years, and the greatest increase has been in the developing countries (see Figure 1) According to a World Health Organisation WHO report (1991) the increase in urban population is expected to be even more rapid in the next thirty five years, with an explosive growth in cities in the developing countries and this makes the health needs of the urban population more critical since rapid urban population growth normally has its attendant health hazards.

Ghana is no exception. The country is now believed to be 35 percent urbanized having attained an urban growth rate of 3.3 percent in Accra, the national capital and a primate city. According to a Population Impact Project (P.I.P) publication on population and development in Ghana, in 1945 Accra occupied less than 10 percent of its present size. However, it has since expanded so rapidly that projections show that the city has already crossed the boundaries originally demarcated for it. In terms of actual population, Accra has increased from about 500,000 in 1970 to about 960,000 in 1984 (Benneh, 1987).

Fig. 1 INCREASE IN URBAN POPULATIONS, WORLD AND DEVELOPING COUNTRIES, 1950-2025.



Source: UN Population Division (1984); UN Department of International Economic and Social Affairs (1989).

Tables 1.1 and 1.2 showing population trends and projection for A.M.A. respectively.

Table 1.1 Population Growth Trends of A.M.A. 1960, 1970, 1984

Year	Population	Annual	Growth rate
1960	388,396		
1970	636,667	1960-1970	5.1
1984	969,195	1970-1984	3.1

Data Source: Ghana Population Census 1984.

Table 1.2: Population Projections for A.M.A. 1990 - 2010 ('000s)

Year	Projected population
1990	1234
1995	1514
2000	1843
2005	2231
2010	2682

Data Source: Benneh et al, 1991.

This rapid population growth of Accra has led to urban sprawl and uncontrolled physical expansion from the municipal boundary to the adjoining Ga district. Among the notable residential satellite settlements that have sprang up include New Achimota, Kwashieman, Gbawe, Ofankor, Dome, Haatso, McCarthy Hill, Madina and Adenta.

In addition to this physical expansion, there has also been increased crowding in existing residential areas. This has resulted in higher occupancy ratios in existing housing units and the in-filling of vacant plots in the existing residential areas (Benneh et al 1990 pp.17-19). The overcrowding has been particularly severe in the numerous unserviced and unplanned slum areas like Nima, Maamobi, Russia, Sukura, James Town and Chorkor.

Thus, development may bring benefits but it also has associated costs. Whatever underlying explanations is accepted as the reasons for, and nature of development, many side-effects can impinge directly on health, some being deliberate and positive as in the combating of vector-borne diseases such as malaria and trypanosomiasis in areas of agricultural extensions while others are accidental, unexpected and negative like the dangers to health of urban pollution, for example.

Urbanity has thus created uncontrolled urban waste which threatens any healthy living in the urban centre. This has therefore necessitated the establishment of new health facilities among other physical and social infrastructure to cater for the needs of the growing population. Unfortunately, the economy of the country which has been caught in the web of the international economic order cannot support any such new developments. Even the old ones cannot be maintained and hence, their rapid deterioration.

As a result, a large proportion of the urban population especially the urban poor is unfortunately at a risk of both communicable and non communicable diseases. Such diseases like cholera, diarrhoea, measles, dysentery and typhoid are very rampant in the city especially among the children. Evidence in Accra of cholera

morbidity in 1991 suggests that the urban poor living in degraded slum environments are more at risk from cholera attack. The residential areas where the diseases are prevalent are mainly found in the poor neighbourhoods like Nima, Accra New Town, Maamobi, Zongo, Sukura, Abeka, Darkuman, James Town, Korle Wokon and Korle Gonno.

The relationship between area of the city and diarrhoea prevalence displayed in Tables 1.3 and 1.4 shows that poor areas of the city are also those with the greatest diarrhoea prevalence.

Table 1.3: Relationship Between Wealth and Childhood Diarrhoea Prevalence

Wealth Group	Number of Households with children under 6	Two Week Prevalence of Diarrhoea (%)
Low	457	14.7
Medium	59	8.7
High	21	0.0
Total	53.7	13.6

Data Source: Benneh et al, 1993. Environmental Problems and the Urban

Household in the Greater Accra Metropolitan Area (G.A.M.A) – Ghana. pp.

**Table 1.4: Relationship between Residential Sector and Childhood Diarrhoea Prevalence**

Area	Number of Households with Children Under 6	Two weeks Prevalence of Diarrhea (%)
RF	29	24.1
HDLCS	274	14.0
HDIS	81	26.0
MDIS	61	5.0
M-LDMCS	70	4.3
LDHCS	22	4.6
<b>TOTAL</b>	<b>537</b>	<b>13.6</b>

Key: RF = Rural Fringe : HDLCS = High Density Low Class Sector, HDIS = High Density Indigenous Sector; MDIS = Middle Density Indigenous Sector; M-LDMCS - Middle to Low Density Middle Class Sector; LDHCS = Low Density High Class (Including Newly Developing sectors).

Data Source: Benneh et al, 1993.

Meanwhile, the residents in these disease prone areas appear inaccessible to the health facilities available due to several reasons and this observation has gingered interest in the present study.

## 1.2 Statement of the Problem

Accra has in recent years witnessed an unprecedented growth in its population size and areal extent with its attendant health and other health related problems. However, one important feature of access to modern health care facilities in urban

peripheral and peri-urban sites. Most locations have been very poorly served with formal health care, either because their growth has occurred in an unplanned way outstripping the official provision of facilities or because of an absolute lack of capacity. Table 1. 5 depicts the various Government and quasi-government health institutions in A.M.A.

Table 1.5: Health Institutions: Government and Quasi-government - 1996.

District	Population	Institutional District Headquarters	- Institutional Sub District
Kpeshie	286,970	La Polyclinic	- Airport Clinic - Police Hospital
Okaikoi	340,170	Kaneshie Polyclinic	
Osu Klottey	177,800	Adabraka Polyclinic	- Ridge Hospital - Osu Stadium Clinic - Osu Castle Clinic - Osu Maternity Home - Parliament Clinic - SSNIT Clinic - TUC Clinic
Asiedu Keteke	104,880	Ussher Town Polyclinic	- James Town Clinic - Korle Gonno Clinic - P.M.L. Hospital - Makola Clinic - Fire Service Clinic
Ayawaso	287,870	Maamobi Polyclinic	- Legon Hospital - Achimota Hospital - Military Hospital - Mallam Atta Clinic - Nima 441
Ablekuma	318,570	Mamprobi Polyclinic	- Dansoman Clinic - Korle-Bu Polyclinic

Source: Office of District Co-ordinating Unit (D.C.U.) Adabraka Polyclinic, 1996

It is evident from the table that the distribution of health institutions is skewed, with Osu Clottey sub-area, though one of the least populated, having the highest number of the facilities while Okaikoi, the most populated sub-area, has only one

polyclinic, that is the Kaneshie Polyclinic. The Korle-Bu Teaching hospital was deliberately omitted due to its unique position in the country's health delivery system i.e. it is one of the two major teaching and referral hospitals in the country. Consequently, Hart's (1971) "inverse care law," according to which those in greatest need of care have the worst access to it thus seems to operate as much in Accra as it does elsewhere in other cities in Third World countries such as Nairobi (Harpham et al, 1988); Ibadan (Iyun, 1983); and Kingston (Bailey and Phillips 1990). Gaps appear widening between the urban rich and poor, between need and provision, between 'haves' and 'have-nots' in health care. Sadly enough, the reality is that neither the public nor private health services are reaching the urban poor. While the private services are increasingly abandoning the poorer and declining areas, the under resourced public sector services are unable to meet the dwindling demands of the urban poor.

It is also important to realize, and as rightly noted by Gilles and Lucas (1973) that "Adequate Health Services imply more than the provision of medical and health institutions, facilities and technical staff to perform the function. Their effectiveness depends on their being available and readily accessible to most, if not all, members of the community, in forms which people are able to understand, accept and utilize".

Quite unfortunately, however, no serious attention is paid to the increasingly quantitative and qualitative increase in health problems of the urban poor and how accessible the "limited" facilities are to them. This thus gives a problem worth investigating and it is the realization of this deficiency and the need for such a vital information for any meaningful planning that instigated the present study.

### 1.3 Literature Review

Attempt is being made to examine some of the various literature on urban growth and the attendant health problems, and to analyze some of the concepts involved. It is hoped that by so doing, the magnitude of the problem will be more manifested and thus help throw more light on how to achieve equity in the provision and location of urban health care.

#### 1.3.1 Health and Location of Health Services

The W.H.O. defines health “as the state of complete physical, mental and social well being of an individual and not merely the absence of infirmity”. Dr. Halfadan Mahler, the Director General of WHO in his writing on “Health for all by the year 2000” also referred to health as the attainment by all the people of the world of a level of the health care that would permit them to lead socially and economically promotive life

It is obvious from the foregoing complementary definitions that health does not only denote anatomical nor physiological facts alone but has mental and socio-economical and even political dimensions. One can therefore agree with Lucas and Gilles (1973) the more when they defined health services as “those services which provide for promoting of health, happiness and efficiency by teaching healthy living and by providing adequate housing, nutrition, etc.”

Health services can thus be viewed as a system that provides essential services geared towards promoting the physical, mental and socio-economic well being of the individual in particular and the society as a whole. It includes the direct provision of health services by medical personnel in order to cure or prevent illness and/or the provision of such services with the aim of improving sanitation,

and thus minimizing diseases. It has many facets which include curative, preventive, promotional as well as rehabilitative services all of which aim at eliminating human sufferings and diseases. These various facets should be effectively organized and managed to ensure the provision of better health services.

Generally, the aim of most locational planning in health care has been ostensibly to maximize accessibility to a given quantity of resources by optimizing spatial distributions. To achieve this objective various forms of spatial allocation models and spatial search have been used (Massam 1975, 1980, 1987; Massam et al 1986; Oppong and Hudson, 1994) which, under a given set of 'acceptable' criteria, identify a number of solutions to the location of a set of health care facilities.

In location - allocation modeling, geographical accessibility may be conceptualized in two main ways - proximity and coverage. When defined in terms of proximity, accessibility has a distance minimization connotation and may be measured using average travel distance. As a locational goal, proximity translates into selecting facility locations to minimize average travel distance for users. Previous research has found distance to be a major disincentive for facility use (Stock, 1983). Accessibility may also be expressed using coverage distance.

If a facility is within the specified coverage distance from a person, it is considered accessible to the person and the person is said to be covered. Those beyond this distance are not covered. The measure of accessibility in this context is the proportion of people covered. As a locational goal, this approach translates into maximum covering location problem. Rushton (1984; 1988) has argued

strongly for the role location - allocation models might play in using limited resources more efficiently to provide access for those currently without access.

This study does not intend to delve into the rudiment of the various location - allocation models. However, some of their weaknesses which make their application in their original form to Third World countries in particular and Ghana for that matter very difficult, if not impossible, cannot be overlooked. A practical weakness of these models for optimizing accessibility, from the point of view of the Third World in particular, as rightly emphasized by Phillips (1990) is that reliable data are frequently unavailable and the models can rarely take account of all the variables that seem to influence allocation and health services utilization. Such factors like travel cost, time, convenience, personal preference, physicians behaviour, the nature of a facility and its reputation are crucial but are not easily modelled as their variables are either non-quantifiable or change from time to time.

Part of the problem is also that health facilities have often grown up in a fragmented manner, provided by public, private, charitable and aid sources, and they have frequently been non-complementary or even competing in their functions and locations (Phillips, 1990). Political influence, corruption, fortuitous factors and above all the paucity of resources have often played their part in bringing about the present-day mal distribution of health facilities.

The above criticisms notwithstanding, Rietveld (1990); Opong and Hodgson (1994) and others, have correctly noted that the critics tend to exaggerate the data requirements of location - allocation models and that data permitting, backed by the political will, location - allocation modelling may be used as a planning tool.

to assist decisions on the optimal location of a given number of facilities in a region. The procedure, in principle, allocates facilities to locations that will serve the most people yet minimize travel distance. It should however be emphasized that like all theoretical answers, location-allocation models tend to neglect social and economic variation among populations and thus can ignore equity considerations.

### 1.3.2 Access to Health Facilities

One of the goals of the Government of Ghana in the implementation of the Primary Health Care (P.H.C.) strategy is to improve accessibility. This may be seen as reducing the distance between health facilities and users. This goal can also be viewed in average terms, i.e. improving the proportion of people within a specified distance of a health care facility. Consequently whatever “formula” is applied to arrive at a decision to put up a particular health facility in a particular “region”, it is hoped that it would be accessible to all people within its proposed catchment area. However, this apparent simplistic assumption precludes many variables and factors that can determine whether or not a facility is used and more importantly, whether it is used at an appropriate time and effectively.

A number of discrete but often inter-related variables appear to influence health care utilization. Some are service-related characteristics: type, size, location, costs and quality; others are community-wide, such as transport or the availability of financial support; yet others may be personal or family-related: age, sex, income, social status, family size, mobility, religion. (Phillips, 1990). Infact research over the years (Sai, 1972; Carlstein et al, 1978; Mesa-Logo, 1985;

Adibo, 1986;) has emphasized that many variables other than physical availability of a facility may intervene to prevent or distort access or utilization.

### *1.3.2.1 Urban Poverty and Access to Health Facilities*

According to Tabibzadeh et al (1989) in some developing cities, the poor make up as much as 60 percent of the population and the health problems of these urban poor are being more critical. These health problems involve both diseases which are traditional to the developing countries as well as diseases which have been associated with higher levels of development and industrialization. The urban poor have been characterized as being at the interface between under-development and industrialization. In other words, they are at a mid-stage in the epidemiological transition.

High levels of traditional health problems are indicated by high maternal, perinatal, infant and child mortality rates and by malnutrition and infectious diseases. “New” health problems associated with urbanization and industrialization include cancers, hypertension, mental illness, problems of drug and alcohol use, sexually transmitted diseases such as AIDS, accidents (traffic and industrial) and violence. With this double burden of health problems the urban poor may be characterized as suffering the “worst of both worlds” (Harpham et al, 1988).

Measuring the extent of the health problems of the urban poor is difficult. If the data source is hospitals and health facilities there is the problem that often the urban poor do not use these facilities and are therefore not covered in such health statistics. If data come from community-based measures - for example, national health interview surveys - there is the problem that the urban poor might not be

included in such official statistics, plus the additional problem of aggregated city health data, which mask the degree of health problems of the urban poor. For example, infant mortality (deaths by the age of 1 per 1,000 live births) might be around 80 in the city as a whole but reach 200 for certain slum areas (Harpham, 1995).

The scarcity and contamination of water supplies and the lack of sanitation and appropriate sewage disposal make diarrhoeal diseases one of the most important health problems in poor urban areas: the main cause of death of poor urban children under 5 years is often diarrhoeal dehydration. (WHO, 1991). Malnutrition often occurs both as a cause and as an effect of diarrhoeal diseases. The need to buy food has been identified as one of the most important factors responsible for high rates of disease and mortality among the urban poor. Rural people may at least have a small plot of land on which to grow their own vegetables or to rear some animals, while the urban poor are dependent upon the cash economy. Infectious diseases such as measles and acute respiratory infections can have a significant impact on nutritional status, and the high level of indoor crowding in poor urban communities means that transmission rates of infections are very high. For example according to Harpham (1995) in one of the poorest slums of Port-au-Prince, the capital of Haiti, 40 percent of children had already had measles by the age of twelve months. Often malnutrition in poor urban communities starts very early in life - within the first six months. This is likely to be associated with early cessation of breast-feeding and the reliance on artificial feeding provided by surrogate mothers or siblings. The early introduction of bottle milk, encouraged by multinational companies'

advertisements, and involving the use of contaminated water, is a particular threat to the urban infant. Data from the World Fertility Survey found that rural women breast-feed for two to six months longer than their urban counterparts. More substantial differences occur in Indonesia (nine months), Jamaica (seven months) and Thailand (eleven months). With poor urban women relying on work in the informal sector with no child-care facilities, this threat to infant health in cities seems likely to increase, given the economic decline in many particularly sub-Saharan African cities in the Third World (W.H.O., 1991).

Whereas the above health problems have been associated with the 'traditional' health profile of developing countries, certain health problems are now emerging within poor urban communities which have previously been considered typical of industrialized countries. An example of such health problems is mental ill-health. Mental ill-health is emerging as an important but neglected problem in developing countries. A recent analysis of the 'global burden of disease' is undertaken in the World Bank's (1993) World Development Report, which has the theme of 'investing in health'. The analysis uses 'disability-adjusted life years', which essentially take into account the expected duration of a condition, its severity and the age groups it is most likely to affect in order to produce a measure of the disability caused by morbidity (as opposed to years lost due to mortality). Mental illness has appeared as an important component of the burden of disease in all regions, particularly for young women. Clearly, health policy-makers, health planners and health providers have to take into account a very wide range of health problems when addressing the health needs of poor urban populations in the Third World.

### *1.3.2.2 Cost of Health Services and Access to Health*

Another equally important aspect of accessibility which cannot be overlooked is affordability or cost of health services. The cost of medical care in recent times has risen so much so that many urban dwellers especially the poor find it difficult to afford even the basic health services. And as a recent documented statement by the World Bank rightly laments, “the plight of the poor and vulnerable remains desperate with limited access to health, education or good drinking water, and severe constraints on their ability to produce and/or earn enough to meet their basic needs” (Bentsi-Enchill, 1988).

In Ghana, the picture appeared gloomy with the introduction of the Economic Recovery Programme (ERP) in 1983 and the subsequent Structural Adjustment Programme. Tailored to meet Western donors “conditionalities”, for example the imposition of the harshest fiscal and monetary measures, the ERP rejects the principle of subsidies. The government has therefore phased out price subsidies on most public services, e.g. electricity, telephones, water, health and education. One significant result of the government’s strict adherence to the cost-recovery ethic is the introduction of user fees for all public health care facilities. Tables 1.6 and 1.7 indicate the user fees that came into effect in 1985 for out patients in the country when user fees was introduced.

Table 1.6: Hospital Fees for Public Health Care Facilities - 1985

Services	Fees, ¢		
	Adults	Children	Non-Ghanaian
<b>Teaching Hospitals:</b>			
Specialist Consultation			
First Visit	200.00	100.00	400.00
Follow-up visit	50.00	25.00	100.00
General Consultation	75.00	40.00	200.00
<b>Regional Hospitals</b>			
District Hospitals	75.00	40.00	100.00
Urban Health Centres	50.00	30.00	80.00
Rural Health Centres and Posts	30.00	20.00	80.00

Source: Ministry of Health, Hospital Fee Regulations Ghana Publishing Corporation, Accra July 9, 1985.

Corporation, Accra July 9, 1985.

Table 1.7: Hospital Fees - Accommodation and Catering Services - 1985

Service	Fee Per day ¢
<b>Open Ward with catering services</b>	
Adults	100.00
Children	50.00
<b>Amenity Wards with Catering Services</b>	
Ghanaian	250.00
Non-Ghanaian	500.00
<b>Side ward with catering services</b>	
Ghanaian	150.00
Non-Ghanaian	400.00
<b>Hospitals without catering services</b>	
Adults	40.00
Children	20.00

Source: Ministry of Health, Hospital Fee Regulations. Ghana Publishing Corporation, Accra, July 19, 1985.

Corporation, Accra, July 19, 1985.

In 1985, hospital fees were increased by 800 to 1000 percent of 1983 rates. For example, instead of ₵25.00 (1983) patients paid ₵200.00 for specialist consultation during a first visit. Adults at open wards with catering service paid ₵100.00 instead of ₵10.00 a day. With the introduction of user fees, accessibility to public health care services for low-income urban and rural dwellers is considerably reduced. (WHO 1995).

The situation today is even worse with the introduction of the cash and carry system where patients are expected to pay for the full cost of treatment including drugs. Even the World Bank acknowledges that structural adjustment is hitting the poor urban populations the hardest (World Bank 1991). In a country where farmers' and workers' incomes do not suffice for even their barest needs owing to high prices of goods and services, an additional load of massive increases in hospital fees is clearly causing great concern to a large proportion of the population.

### *1.3.2.3 Physical Distance and Access to Health*

The fact that physical distance acts as a barrier or disincentive to attendance at almost any sort of facility has well been attested to by many researchers (Sai, 1972; King and Jolly, 1966). Sai in particular remarked, "Studies have consistently shown that with the best in the world, people who are more than 4 to 5 kilometers away from health facilities hardly consider them as their own and use them only in cases of emergency." Distance also expresses itself as time- the time (and costs) of travel, which may well differ among facilities. All things being equal, people will prefer the nearest facility available.

It is implicit in the above that the effects of distance will vary in severity from one family to another depending on their physical and personal mobility, their financial and other resources. The effect will also vary from community to community, because “transport network” and mode of transport are of different levels of sophistication and these “community resources” will influence the ease with which members of the community can use the available services (Phillips, 1990).

Distance is therefore only one variable which may interact more or less strongly with others to influence access to a facility and as Anderson (1968) rightly acknowledged, “a pre-condition for medical care is that contact be established between people needing and persons/facilities providing health services. It must be possible for this contact to be realised at the time and place of need if an optional level of medical care is to be provided. Essentially then, the requisites are adequacy, appropriate geographical distribution and absence of cultural, economical and educational barriers to medical care”.

In Accra, the effect of distance on the access to health care services will be more manifested due to its ever increasing urban sprawl and uncontrolled physical expansion. This coupled with the historical fixation of health services on curative and institution-bound makes the problem more threatening as many residents especially the disadvantaged urban poor who are typically housed in slums and squatter settlements and have to contend with appalling overcrowding, bad sanitation and contaminated water, appear “cut off” from the available health facilities.

#### *1.3.2.4 Waiting Time and Access to Health*

The waiting time and cost of medicines also contribute in determining how accessible a facility is (Phillips 1990). The cost of treatment prescribed may particularly be an important factor in deciding whether to use a service and which type of facility to attend. For example, frequently, drugs will not be available at government outlets and patients will have to attend private shops where the costs of medicine may be prohibitively high, on the contrary, the private clinics/hospitals where drugs are relatively available fees also serve as a disincentive to those low income earning group. As a result, traditional remedies or home therapies, because of their relative cheapness and availability, may be used rather than modern medicine. Above all, there is less of an opportunity to pay for modern sector drugs and treatment with payments in kind, which may add to relative cost of modern medicines thus serving as a further deterrent to their use (Phillips 1990).

Overall, therefore costs of travel and medicines, the necessity on occasions to pay personnel (corruptly) for services that should be “free”, and the direct and indirect cost of waiting time all add to patients’ direct and indirect cost in the receipt of health care. They may influence different groups of patients and potential patients either to use or to avoid a given facility, to repeat attendance or to select a different facility (public or private) or even a different form of therapy. More importantly however, accessibility appears to be strongly discouraged by distance which might imply that only the better off are able to travel to more distant facilities.

### 1.3.3 Traditional Medicine in the Context of Health Delivery.

The inability of most urban dwellers especially the urban poor, to utilize the modern health facilities coupled with some of our traditional practices and beliefs have compelled them to rely on other sources of medication like the traditional herbal medicine. In fact, it has become so important recently that governments, organisations and world bodies have began advocating for and pursuing policies aimed at legitimising its usage (WHO 1977, 1982; Twumasi 1973; Aluwihères 1982). WHO (1977) in particular urged governments “to give adequate importance to the utilization of their systems of medicine with appropriate regulations as suited to their national health systems”.

The inadequacy and maldistributed nature of the present modern health facilities coupled with poverty means that most people will continue to rely mainly on traditional herbal practitioners and local medicinal plants for primary health care. Practitioners include traditional birth attendants, herbalists and bone-setters. Twumasi (1973 p.105) rightly noted that “at present there is a clear indication of a trend; more people will tend to use the facilities and the therapeutic approaches of scientific medicine. However, the traditional medicine man, if he keeps abreast with the time, may have a part to play”. More significantly, Twumasi (1973) added that since the provision of health facilities is inadequate and governments cannot meet the rising costs of medical equipments, it holds much promise of success when both traditional medicine and orthodox science are pursued in concert.

It is however regrettable to note that despite the existence of herbal medicines over the years and its proven efficacy and safety, and more importantly the only

“safe haven” for the poor populace (both rural and urban), not enough recognition has been given by the government to legitimise its usage.

In the 1970s, the need to rehabilitate and harness the practices of healers into the national health care delivery system in Ghana was expressed (Anyinam, 1989). But the role of indigenous medical practitioners in the deployment of health services was kept ambiguous. A Centre for Scientific Research into Plant Medicine was established at Mampong Akwapim in November, 1973. A Manual for Planning the Delivery of Health Care Services prepared by the Ministry of Health in 1978 recommended that healers, especially traditional birth attendants, be involved in the development of health planning (Ministry of Health 1978).

Only a few isolated experimental projects (non-governmental in character and set apart from the conventional national health care system) were implemented to involve healers officially in health care, e.g. the training of traditional birth attendants under the Danfa Comprehensive Rural Health and Family Planning Project (Ofosu-Armah, and Newman, 1979); a community based research project at Kintampo District in the Brong Ahafo region, which attempted to determine the social process that would institutionalize healers in health care; and a hospital based training scheme for healers in Techiman in 1979 (Warren, 1982).

It is probably this realisation that made the fourth Republican Parliament to harshly attack the status quo and consequently underscored the need to encourage the development of herbal medicine to supplement orthodox medical treatment in the country (Ghanaian Times, Saturday, July 11, 1996 p.1). Members unanimously expressed concern about the little recognition given to herbal

medicine by the sector Ministry and consequently called for immediate efforts to integrate it into the country's health care system.

The hard fact is that this branch of medicine is making and will continue to make a very significant contribution to our efforts to achieve health for all. Thus the earlier a proper and conscious effort is made to integrate it into the orthodox practices, the better it will help the government in achieving healthy standards comparable to some of those who have already taken the lead in that direction. The apparent neglect of traditional medicine and the fact that no programmes to integrate it into the orthodox practices have been properly put in place have resulted in the loss of confidence in the former and over dependence in the latter, a situation which is quite detrimental to the health of both urban and rural poor.

#### **1.4 Conceptual Framework**

Health services are in principle, provided for, and to the benefit of all the populace. However, certain direct and indirect factors work together to "prevent" some access to these facilities and in the urban environment, it appears the poor suffer most.

To assess the efficiency of the various health services, various models have been applied to describe, determine and predict health services utilization (Rosenstock 1960; McKinlay 1972; Wolinsky and Marder 1983; Suchman 1964; 1966; Anderson 1968; Aday et al 1980) One such model is that of Gross (1972) which incorporates behavioural components as a major determination of utilization.

Most of these models were developed in the North American context although some have been applied and tested in the Third World countries with limited success, and not without some modifications. Significantly, the numerical

expression and measurement of the wide range of variables incorporated in the models have been very problematic. Indeed, Veeder (1975) indicates that the measurement and quantification of beliefs and attitudes, for example, has proved to be a stumbling block for most models. Commenting on the Gross model, for example, Phillips (1990) noted that even though “it is conceptually and mathematically the more sophisticated of the models developed so far but, ironically, this may prove to be one of its empirical weakness, since sufficiently precise data for accurate measurement of the variables are rarely available”.

To circumvent some of the above problems and conscious of the fact that it is possible to envisage utilization as the product of characteristics of patient, provider and the system has made one to believe that Aday and Andersons' (1974) model is a more appropriate one for the present study. It is infact a general system model that provides a framework for the study of access to health services especially in the Third World countries where health facilities are woefully inadequate.

Systems in general can be looked at in various ways. However, a simple dictionary definition states that a system is a complex whole, a set of connected parts, or an organised group of related objects. Scholars like Wilson (1986) and Dury (1981) have all defined a system as an interconnected objects working together as a whole.

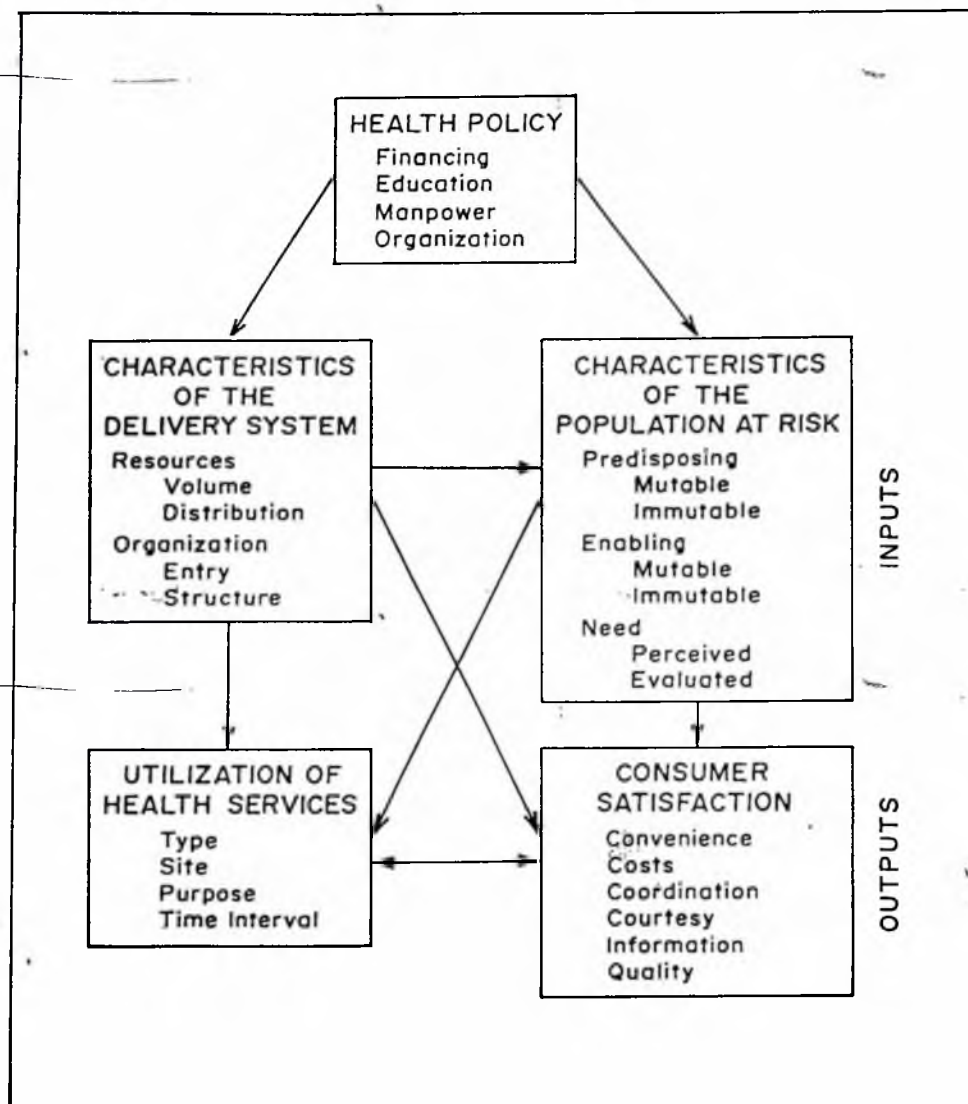
It is worth mentioning that all systems are visualized in relation to the state of balance between inputs and outputs. As an open construct, a system receives inputs and in turn makes outputs. Such a system is said to be in dynamic equilibrium and seasonal fluctuations within its general condition of stability

permit us to describe it as being in a steady state. If inputs and outputs of a system fail to balance, the structure of the system must change. So must its pattern of behaviour. A system where serious imbalances occur is said to be in a disequilibrium (see Fig.2).

As can be seen from the model, it can be said that health policy nationally and locally is based on the characteristics of the system and the population at risk. These may be considered “inputs” to health services. The outputs, dependent on the inputs, are utilization of a given type, level and purpose, and the resulting consumer satisfaction with costs, quality, convenience, information, courtesy, etc. An equally important article stressed in the model is the pervasive influence of state policy. In fact the availability of modern treatment in particular will directly affect choice available locally and these are most often directly provided by the state. If there are insufficient facilities then this effectively excludes many residents from modern treatment making other available options open to them. Joseph and Phillips (1984) rightly sum it up by noting that “the model provides a type of blueprint for research on individual national systems”.

The above notwithstanding it is important to highlight on some of the inherent problems in the model that limits the effectiveness of its wholesale adaption to the present study. It may be said here that the most distinctive feature of health care that impinges on utilization in many Third World countries and Ghana for that matter is probably the existence of pluralistic health care systems. This means that people often have in theory a wide choice of therapies to utilize, although costs and distances may rule some out at times. An option may be used

Fig. 2 A framework for the study of access to health services



Source: Aday and Andersen (1974)

in preference to another, sequentially or concurrently. The problem - then is how to identify concurrent or sequential use of multiple therapies.

Indeed, matters relating to behaviours also need to be studied over a long period of time and not with one-off questionnaires. The fact is some respondents may be reluctant to admit openly to the use of certain traditional medicines because of the fear of appearing ignorant or backward. Moreover, individual's perception of the efficacy of western therapy relative to traditional treatments for specific ailments also differ. Good (1987) for example noted in Northern Nigeria that fractures were felt better dealt with by traditional bonesetters as hospitals were widely believed to amputate fractured limbs.

It would therefore be recognized that utilization of health facilities is the outcome of many complex interactions among many variables and factors, visible and hidden, which act at different stages. It is therefore impossible to observe the whole process or study it completely. As a result few utilization studies can be anything like comprehensive; most end up focusing on a relatively narrow range of variables and in fact the present study, which adapts Aday and Anderson (1974) model, will not be an exception.

The foregoing review has demonstrated, most significantly, that the provision of health services/facilities is beyond that traditionally held notion of erecting the physical infrastructure - the curative approach. In fact, it also connotes preventive services like immunization as well as promotion and rehabilitation services.

It also emphasizes the fact that the historical fixation of modern health facilities in specific areas in Ghana coupled with the resultant harsh effects of the government's Structural Adjustment Programmes, among other factors, have

made many urban dwellers especially the urban poor, appear cut-off from most of the modern health facilities. Hence, such unfortunate people tend to look out for other options available and affordable elsewhere. The existence of these multiple complex interactions and therapies, it has been noted and have been among the main problems hindering the investigation and especially modelling the use of health facilities.

Moreover, it has been realised that utilization of health facilities is the outcome of complex interactions among many variables and factors, visible and hidden which act at different stages to influence utilization.

Thus, for the government to achieve its objective of health for all as enshrined in the Programme, Vision 2020, then there is a purposeful need to adopt an integrated approach to health policies. It is in this direction that the adoption of the P.H.C. strategy by the government is most recommendable. Infact apart from emphasizing the preventive aspect of health care delivery which is cost effective, it incorporates the local population in the planning, implementation, management and monitoring of health services.

### **1.5 Objectives and Hypotheses**

The overall objective of the study was to analyse access to health facilities within the Accra Metropolitan Assembly (A.M.A.) (shown in fig.3) especially the poor living in slums and the peri-urban areas.

The study specifically sought to:-

1. Map the spatial distribution of health institutions/facilities in the metropolis and attempt to determine the factors that have accounted for this.

2. Analyse access to health institutions within the metropolis with special reference to the urban poor located in the low class residential sector of the city.
3. Give some recommendations which will ensure equal access to health facilities within the metropolis. The achievement of these objectives will help provide a useful basis for guiding policy-makers in their future health policies within the metropolis.

The following hypotheses have been tested with data to be collected from the field:

1. The location of health institutions/facilities is directly related to the population density of Accra.
2. Access to health facilities varies directly with one's socio-economic characteristics like income and education.
3. There is an inverse relationship between distance and access to health facilities in the metropolis.

In general, the work has been organised and presented in six chapters. Chapter one is essentially introductory setting out the problem, reviewing the available literature, objectives and setting at the hypotheses of the study.

In chapter two, an attempt is made to discuss the various methods and procedures employed in carrying out the research, whilst chapter three presents some background information on the study area.

Chapters four and five are analytical chapters in which various aspects of data collected from the field have been examined. Whilst chapter four looks at the relationship between the utilization of health facilities and the socio-economic

In general, the work has been organised and presented in six chapters. Chapter one is essentially introductory setting out the problem, reviewing the available literature, objectives and setting at the hypotheses of the study.

In chapter two, an attempt is made to discuss the various methods and procedures employed in carrying out the research, whilst chapter three presents some background information on the study area.

Chapters four and five are analytical chapters in which various aspects of data collected from the field have been examined. Whilst chapter four looks at the relationship between the utilization of health facilities and the socio-economic variables used in the study, chapter five examines reasons why one health facility is used in preference to another. Chapter six, which is the last chapter, presents a summary of the major findings and conclusions of the study. Recommendations are also made in the light of the findings of the study.

In the subsequent chapters, attempts will be made to examine how some of variables identified in the Aday and Anderson's model in particular, affect utilization of health facilities in the Accra Metropolitan Area (A.M.A. In the meantime, the next Chapter gives a vivid description of the main approaches, methods of data collection and analysis used in the study in general.

## CHAPTER TWO

### RESEARCH DESIGN

#### 2.1 Introduction

Attention has so far been focussed on the problem of the study as well as reviewing the available literature on the subject. This chapter provides a description of approaches and methods of data collection and analysis used in the study.

The major criteria for the choice of the Accra Metropolitan Area for the study was that, Accra, being the administrative capital, is currently the largest city in the country exhibiting all the qualities of a true third world city; for example, residential quarters co-exist with slum and squatter settlements for the poor.

Another criteria had to do with the fact that Accra has had periods of relative economic stability because of its administrative functions dating back into the colonial period as well as its industrial activities. It is also the most developed and urbanised city in the country, with by far the best medical and environmental services. The Korle Bu Teaching Hospital, one of the two medical schools in the country today, is located in Accra. Thus one expects to see a better health delivery system in the city.

It is important to recognise that although Accra has characteristics of modernization, there are still pockets of traditionalism represented by the indigenous Ga communities whose traditional areas have been engulfed by the city. The recent spate of rural-urban migration has also added to the problem of traditionalism (Fosu 1984). In fact, the indigenous Gas dominate the old parts of the city such as Chorkor, James Town, Osu, Labadi and Teshie. Ga traditional

areas were originally occupied by fishermen who preferred to live within the proximity of the sea. This led to the establishment of Ga settlements in rapid succession along the coast, often in limited spaces (Benneh et al 1990). The city had a population of 956,157 during the 1984 census and based on the growth rate between 1970 and 1984, Accra's 1994 Population was estimated to be 1,198,116 (Benneh et al, 1990).

## **2.2 Research Instruments**

The field work was carried out by the use of the following instruments:

- a. A detailed and structured questionnaire survey of house holds and some sampled public and private health facilities;
- b. A few selected focus group discussions on health related problems and actions with rank and file members and some executives of ethnic associations, neighbourhood welfare associations and other community based organisation; and
- c. Unstructured discussions or interviews with policy makers and implimentations.

## **2.3 Sampling**

### **2.3.1 Sample Frame**

A survey of 264 households, 9 public health facilities and 15 private health facilities, including traditional health practitioners form the empirical base of the study. At the household level, the survey was administered on the head of the household, whilst at various health facilities random selection of out- patients and the respectively hospital secretaries and Medical Officers in some cases were interviewed. The general topics covered at the various households and in the

outpatients included the general background information of respondents, and general factors affecting their access to health facilities within the metropolis. At the various health facilities topics covered included, locational decisions, infrastructural facilities, human resources/personel, attendance and personal information of the respondent.

### 2.3.2 Sample Size

The sampling procedure was designed to provide representative sample of households with special emphasize on the low income areas. The first step of the household sampling procedure involved proportional stratification according to the residential categories outlined in Table 2.1, an adaptation of the strategy employed in recent Housing Needs Assessment Study (Housing and Urban Development Associates, 1990) of the Accra Metropolitan Area (A.M.A)

Table 2.1 Classification Scheme Residential Areas for A.M.A.

Residential Areas	Neighbourhoods	Selected Areas for Survey
1. Low Class Residential-Areas		
1.1 Old Ga Residential Areas	Chorkor, James Town, South Labadi, Adedenkpo, Old Dansoman, Old Teshie, Sukura, Teshie, Mamprobi, Labadi, Korle Dudor, Osu Christianborg, Accra Central, Korle Gonno, Nungua	Chorkor, Nungua.
1.2 Old Migrant Residential Area	Accra New Town, Sabon Zongo, Nima, Maamobi, Tudu	
1.3 Other Low class areas	Bubuashie, Laterbiokorshie, Alajo, New Mamprobi, Darkuman, Abeka, Achimota, Avenor, Odorkor, North Industrial, South Industrial	
2. Medium Class residential areas	Kaneshie, South Odorkor, New Dansoman, Teshie-Nungua Estates, Tesano, Ringway Estate, Burma Camp, Teshie Camp, Legon, Adabraka, Asylum Down, Accra New Town	South OdorkorAlajo, Abeka North Kaneshie
3. High Class Residential Areas	Airport, Kpehe, North Labone, Ridge, West Ridge, Cantonments	Airport
4. Newly Developing Areas	Dzorwulu, East Legon, MarCarthy Hill, New Achimota, Taifa	New Achimota

Source: Benneh et al, 1990.

The sample was apportioned across the various residential categories by selecting residential areas with the highest population densities. Lack of current population data compelled the present study to rely on the 1984 population census data. It

must also be added that, much attention was focussed on low income residential areas as the study focusses on mainly on to urban poor. The resulting sample size in each stratum is given in Table 2.2.

Table 2.2: Stratification by Residential Category.

Stratum	Sample Share	Sample Size
Old Ga Residential Areas	27%	71
Old Migrant Residential Areas	21%	55
Other Low Class Areas	18%	48
Medium Class Residential Areas	20%	53
High Class Residential Areas	5%	13
Newly Developing Areas	9%	24
Total	100	264

Source: Field Survey, 1997.

Within the neighbourhood, clusters averaging 25 households were selected. To create these clusters, blocks of an estimated fifty household were selected with the neighbourhoods. The selection of blocks was based on reconnaissance survey undertaken by the researcher to identify the principal types of residential areas in the neighbourhood, estimated roughly the share of households living in the different residential types and apportioned the blocks to reflect these areas and also to ensure that areas off the main roads and of high density are adequately represented.

Having identified the blocks, households were selected systematically by walking through the block and interviewing every tenth household. The interviews were done at times when people were not generally working so as to avoid a bias

against households where the principal home maker works. If the principal home maker was not at home, the surveyor continued with the next household, returning later to attempt an interview again. Only after the rest of the household interviews in the block had been completed did the interview look for a replacement household, and households which refused to be interviewed were replaced immediately.

The selection of public health facilities was based on stratified sampling since there are different levels of operation of the various health institutions. Their functional distinctions thus warranted a hierarchical arrangement which thus justifies the use of this technique. In each stratum, selection was based on the out-patients work-load as well as its spatial location. Thus in each stratum 3 health facilities were selected, i.e. the most, medium and the least patronised facilities. The resulting sample size in each stratum is given in Table 2.3. The selection of private hospitals and traditional health centres was based on a simple random sampling since they all have almost identical characteristics.

Interviews at the various health facilities were done randomly. However, one was quite mindful of age and sex. In order to arrive at a fair and unbiased survey, the interviews were conducted at two separate times, peak times and off times.

### 2.3.3 Focus Group Discussions

A conscious effort was made to undertake focus group discussions with community and opinion leaders among other organisations within some of the neighbourhood notably, Abeka, Alajo, South Odorkor and Nungua where public health facilities in particular and health facilities in general appear virtually non-existent to ascertain how their health needs are met and the problems they

encounter. In-depth interviews and discussions were also held with management and policy makers of health facilities in the metropolis.

Table 2.3: Out patient Department. Attendances by Institutions. 1995

INSTITUTIONS	ATTENDANCE (O. P. D.)	SELECTED INSTITUTIONS
<b>CLINICS</b>		
Airport	4165	Malata
Castle	3226	Castle
Stadium	7427	Parliament
Parliament	345	
T.U.C.	-	
Malata	8139	
Nima	3185	
Makola	5435	
Fire Service	-	
Osu Maternity Home	-	
Dansoman Health Post	11993	
<b>POLYCLINICS</b>		
Korlebu	-	
La	65452	
Kaneshie	100235	Kaneshie
Adabraka	18642	Adabraka
Maamobi	39603	La
Ussher Town	20987	
Mamprobi	50269	
<b>HOSPITALS</b>		
Police	14157	
Ridge	24599	Achimota
Legon	3420	Police
Achimota	25460	Legon.
Military	-	
P.M.C.	14793	

Source: Ministry of Health, District Co-ordinating Unit, Adabraka Polyclinic 1996

## 2.4 Analytical Techniques

Many researchers (see for example Philip 1990) have identified various variables that collectively or individually affect utilization of health facilities. However, for want of time and resources, the present study limited itself to a few of these

variables which in the Ghanaian context can affect the utilization of a particular health facility. These are:

- a) Economic (income and Education)
- b) Distance (proximity)
- c) Education
- d) Length of residence in Accra.

These are by no means all the variables which affect the utilization of a facility. However, they give a general insight into all other minor factors which affect the utilization.

The field data have been presented in the form of frequency tables and graphs. In some instances, percentage bar graphs and pie graphs have been employed as a way of enhancing visual appreciation of the data. Cross tabulations were also used to examining the relationship between the variables.

Basically, the study adopted the simple regression model in analyzing the relationship between the various variables and the utilization of health facilities. The chi-square ( $X^2$ ) test of association was also employed to test the relationship between the variables and utilization. In all cases of hypothesis testing, the confidence interval used was 95% within 5% significance level. It must be stated that in the context of this study.

The major problem or limitation of the research procedure was to do with societal perception and cooperation. For example, whilst some respondents were quite skeptical in disclosing their correct income for fear of attracting high taxes or otherwise, others too were reluctant in openly accepting the use of certain health facilities especially the use of traditional health facilities for fear of being

considered backward. In all such situations, other parameters such as the mode of transport use in attending a particular health facility were employed to collaborate the responses to enhance the study.

In particular, problems often arise in studies of this nature because of expectations from the people as to what the study might do to enhance their livelihoods. This kind of problem is very common in the indigenous areas where people often have misconceptions about the purpose of such studies. Studies conducted by strangers or the government are often perceived as bringing some rewards to the area. In such situations, the researcher often finds himself in a dilemma as to whether a purely academic work would receive the needed attention. This notwithstanding, attempts were made to convince the respondents that the study was purely an academic exercise although there is the possibility that the study could bring the needs of the people to the attention of policy makers.

Another problem which this study suffered was generalisation. This was as a result of either lack of current data (especially with population which the study had to contend with the 1984 population census) or the fact that some of the variables used could not be quantified but were used as surrogate measures. More importantly, human behaviour defies quantification.

Finally, the study suffered severe financial constraints as the total amount of ten thousand cedis (₵10,000.00) officially provided by the university authorities for the research was woefully inadequate in the face of the present economic situation in the country. One was therefore compelled to look out for other sources of income to finance the study and this in a way unduly delayed the completion and submission of the final work.

This chapter has outlined the methodological approaches employed by this study to examine the factors affecting the utilization of health facilities within the A.M.A. Attempts were also made to define some of the terms as used in this study. The next chapter will analyse the study area in terms of its urban growth dynamics, its transportation network as well as the distribution of the various health facilities within the Accra Metropolitan Area. This aims at equipping readers with enough background information of the study area which are relevant to the study.

## CHAPTER THREE

### DISTRIBUTION OF HEALTH FACILITIES IN A.M.A.

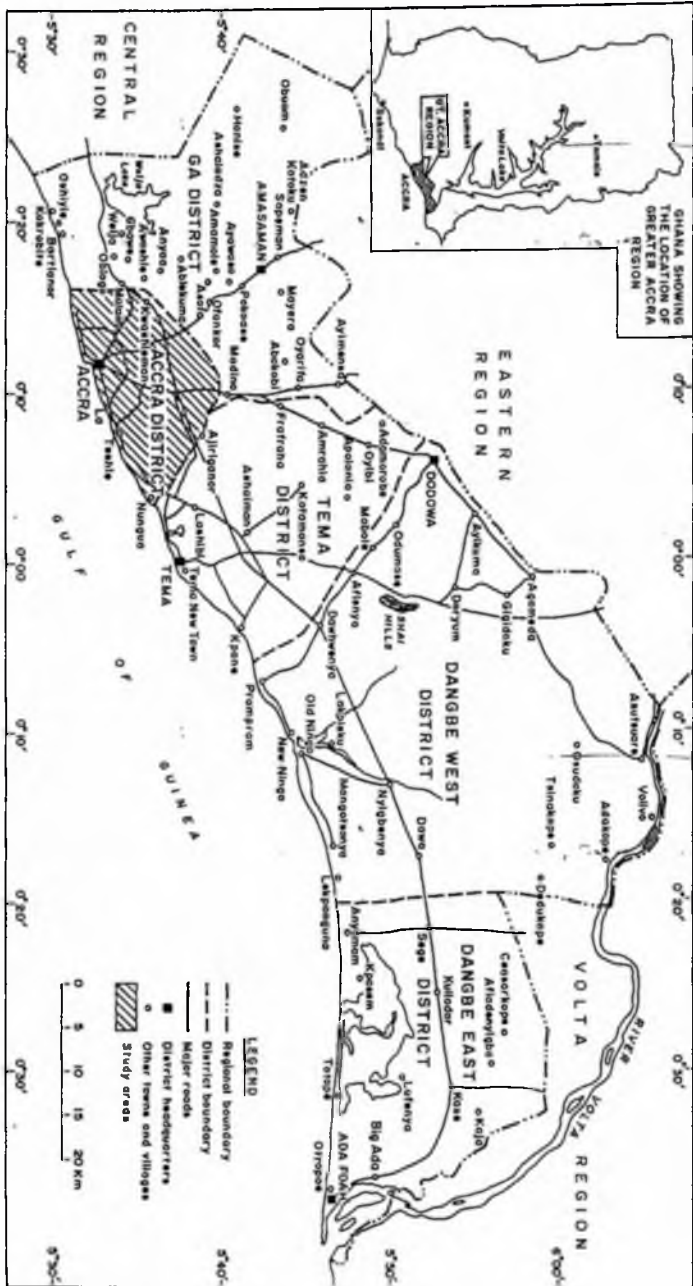
#### 3.1 Introduction

The purpose of this chapter is to introduce readers to the study area by presenting some background information on the area. Attention will be given to the growth and urbanization process of the areas, emphasizing on its population distribution since this has been one of the main parameters used in the allocation of development attributes such as health facilities. Attempts will also be made to consider the road network of the area since the extent to which facilities are utilized depends to a greater extent on how accessible the area is. Furthermore and more importantly, the spatial distribution of the various health facilities, be it public, quasi government, private, mission or traditional within the area will also be considered for the physical presence of these facilities influence their usage or otherwise.

It should be emphasized here that, there are several other facilities which could have been considered to help enhance or throw more light on the study area. However, the difficulty in assembling such data like income distribution and occupancy rate for example, coupled with the element of time and resources have been the main limitation.

The Accra Metropolitan Area (A.M.A.), the study area, is situated on the Gulf of Guinea between longitude 5 degrees, 31<sup>N</sup> and latitude 0 degree, 12<sup>W</sup>, and stands only 1952 cm (64 feet) above sea level (see Figure 3). It lies approximately on

FIG. 3 MAP OF GREATER ACCRA REGION SHOWING ACCRA METROPOLITAN ASSEMBLY (THE STUDY AREA)



Source: Adapted from Demographic Studies and Final Projections for Accra Metropolitan Area (AMA) 1990.

the Greenwich Meridian and occupies a flat and level ground with isolated trees scattered here and there.

The Assembly is about the largest in the Greater Accra Region with an area of about 2299 square kilometres which is just about 10 percent of the Region's total area. It is divided into 6 administrative districts, primarily to facilitate administration, thus enhancing the government's decentralization programme. These administrative sub-metros are Kpeshie, Osu Klotey, Ablekuma, Ayawaso, Okai Koi and Ashiedu Keteke (see Figure 4)

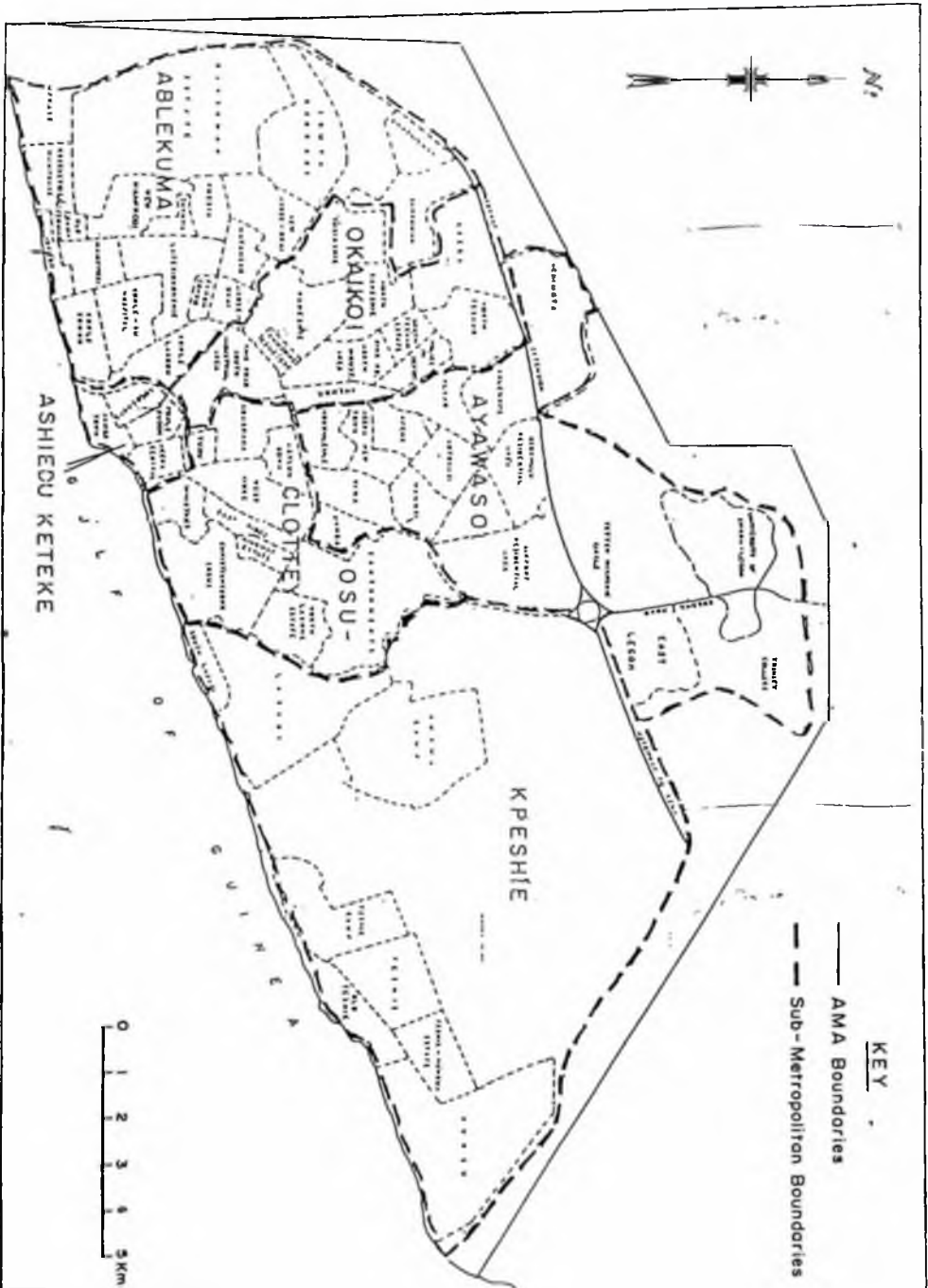
### **3.2 The Urban Growth Dynamics of Accra**

There is no gainsaying that tracing the past developments of Accra will serve as a guide to population analysis. More importantly, tracing the trends in the physical development within A.M.A. will help us better understand trends in intra-urban mobility and changing population density, thus helping in future planning within the metropolis.

Accra is the administrative and political capital of Ghana, and also the capital of the Greater Accra Region. It is by far the largest urban centre in the country. Accra developed not from one centre, but from a series of contiguous settlements formed by different peoples at different times, beginning in the 15th century. Figure 5 indicates the stages of growth of Accra (1830-1956).

Accra's origin lies in the early development of the European forts for tapping on trade with Africans in the hinterland. The Portuguese were the first to build one of such forts in 1482, and were followed in the 17th century by the English, Dutch, Swedes and the Danes. Around these forts developed the initial nuclei of

Fig. 4 THE SUB-METROPOLITAN AREAS OF ACCRA METROPOLITAN AREA



Adapted from Bennet et al. (1990)

42 b

James Town, Usher Town and Osu which appeared as unplanned agglomerations of houses around the forts.

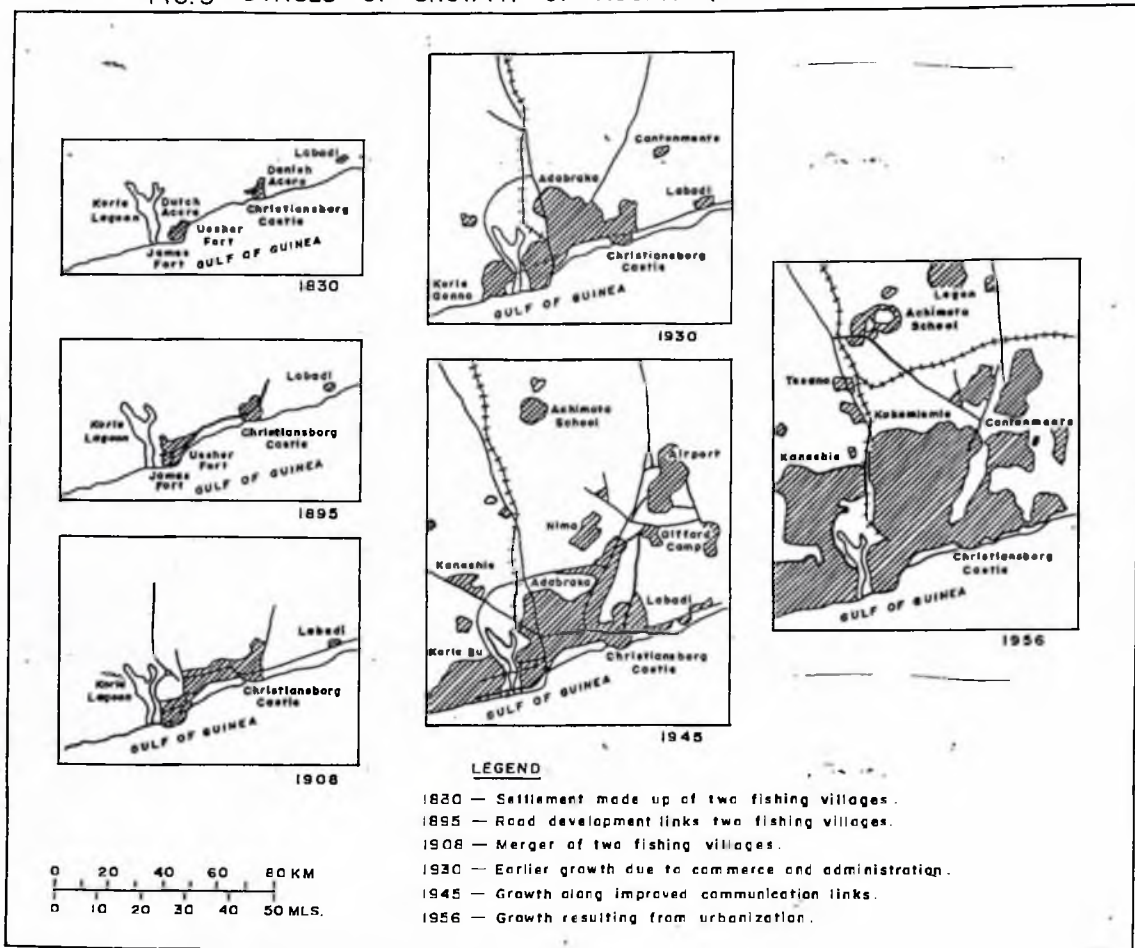
The future growth of Accra was secured in 1877 by the transfer of the seat of government from Cape Coast to Accra. The then emerging rail and road transportation network also added another impetus to the growth of Accra as it served as the radiating point. Above all, the only international airport in the country was also located in Accra (see Figures 5 and 7).

If Accra owes its beginning to the arrival of the Europeans and the subsequent transfer of the capital from Cape Coast, then its metropolitan status today can be said to be the brain child of the policies pursued by the government immediately after independence. The Nkrumah government's urban based import substitution industrial strategies led to the development of large industrial estates in Accra. This also led to a further concentration of head offices not only of the government bureaucracy which was rapidly expanding but also of business, commercial and financial institutions.

The opening of a modern industrial township and a port at Tema in 1962, just 19 kilometres East of Accra, marked a major landmark in Accra's development, greatly increasing its importance as a transport node and strengthening its position as the major industrial city in the country thus consolidating its dominance in the emerging urban system.

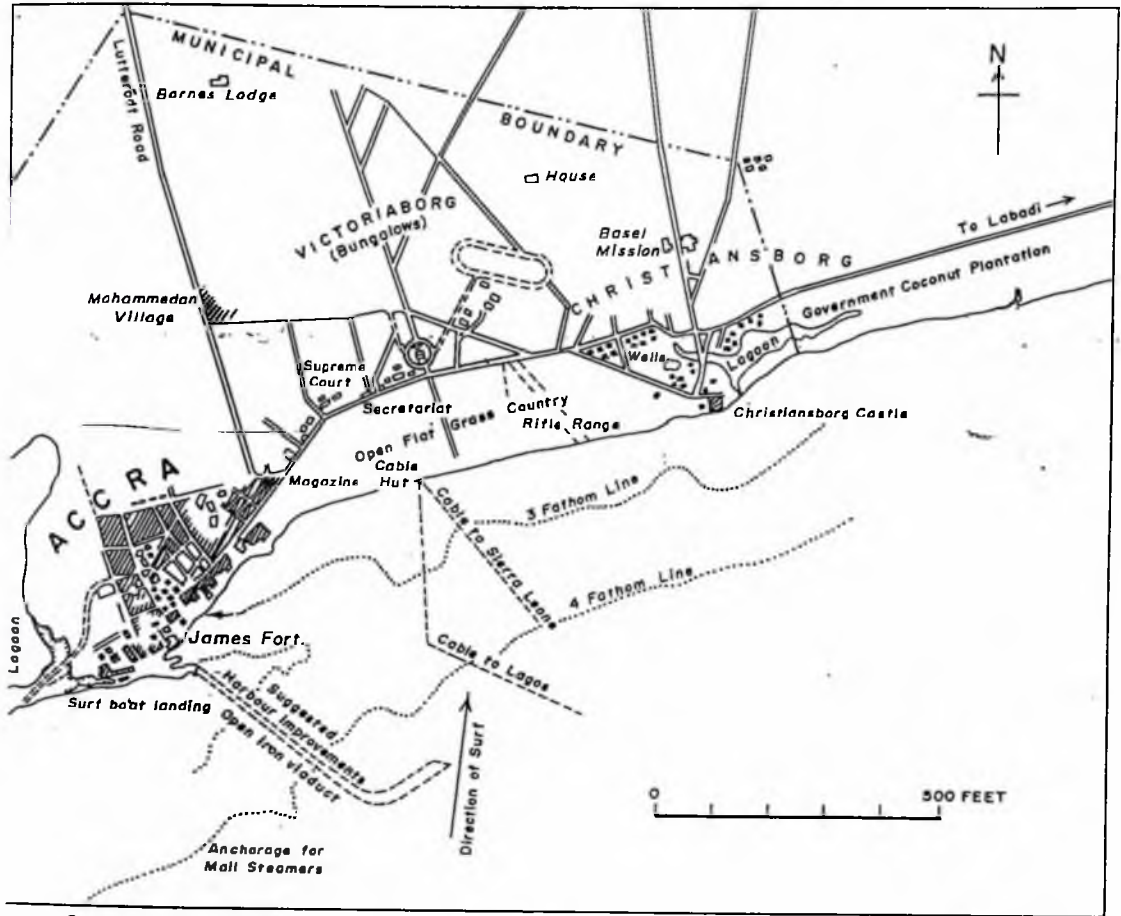
The result of these developments was therefore the scramble for space for industrial and other activities, the need for infrastructural services and more importantly, the beginning of rapid sprawl of residential neighbourhoods since the

FIG.5 STAGES OF GROWTH OF ACCRA (1830-1956)



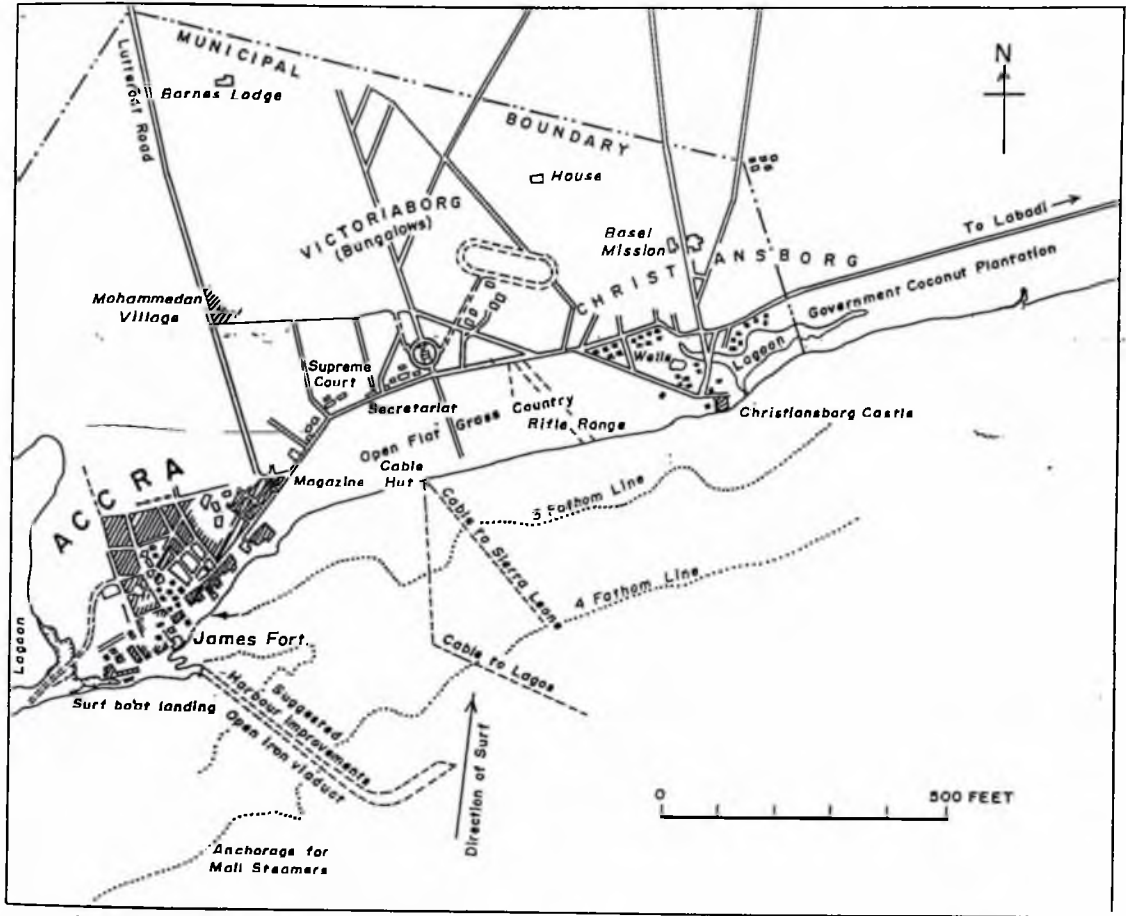
SOURCE: Adapted from Kesse, G. O. (1975) Growth of Accra (unpublished).

FIG. 6 STATUS OF ACCRA, 1903.



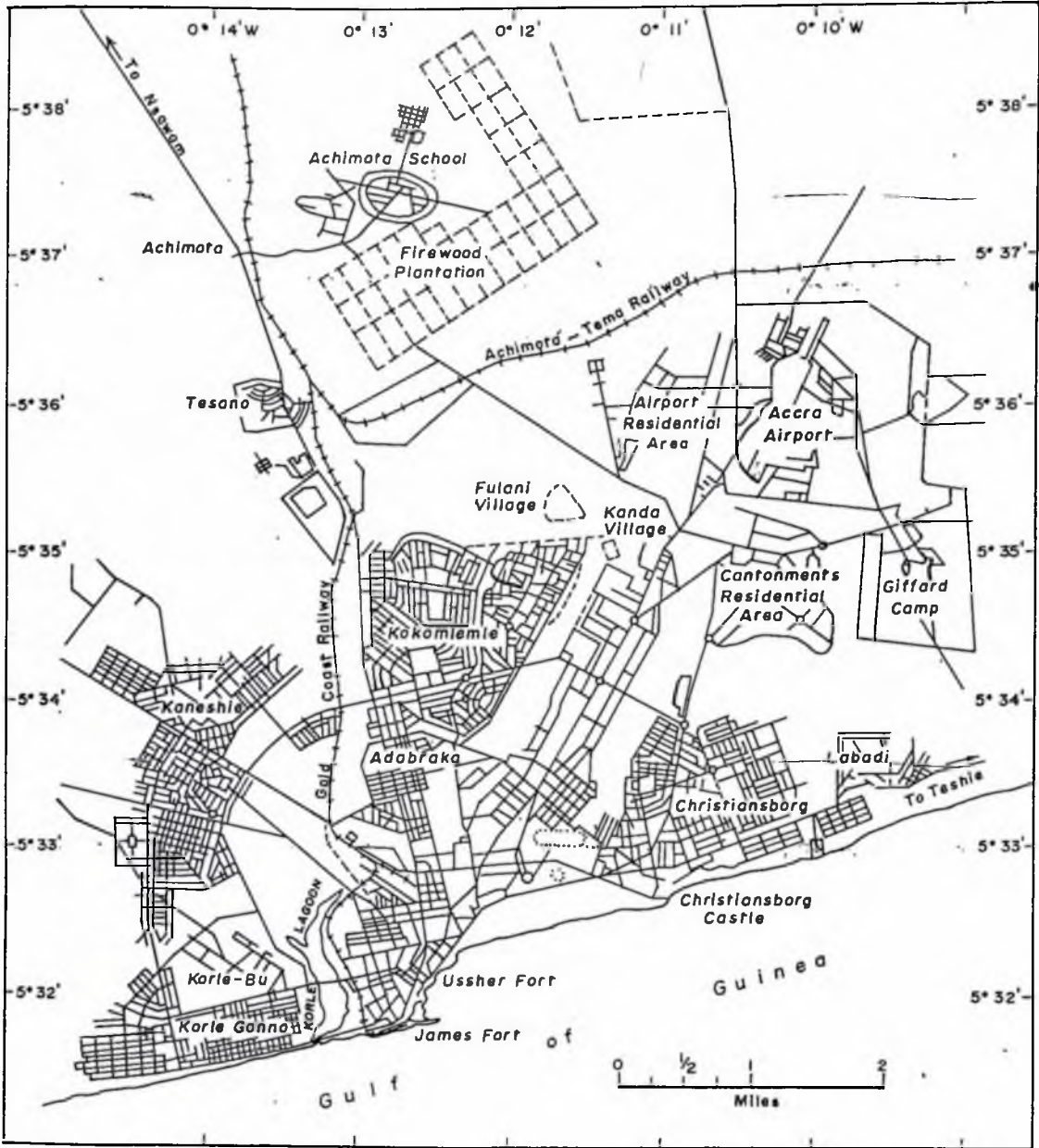
Source: Acquah, 1958.

FIG. 6 STATUS OF ACCRA, 1903.



Source: Acquah, 1958.

Fig. 7 AREAL DIMENSION OF THE ACCRA MUNICIPALITY IN 1954



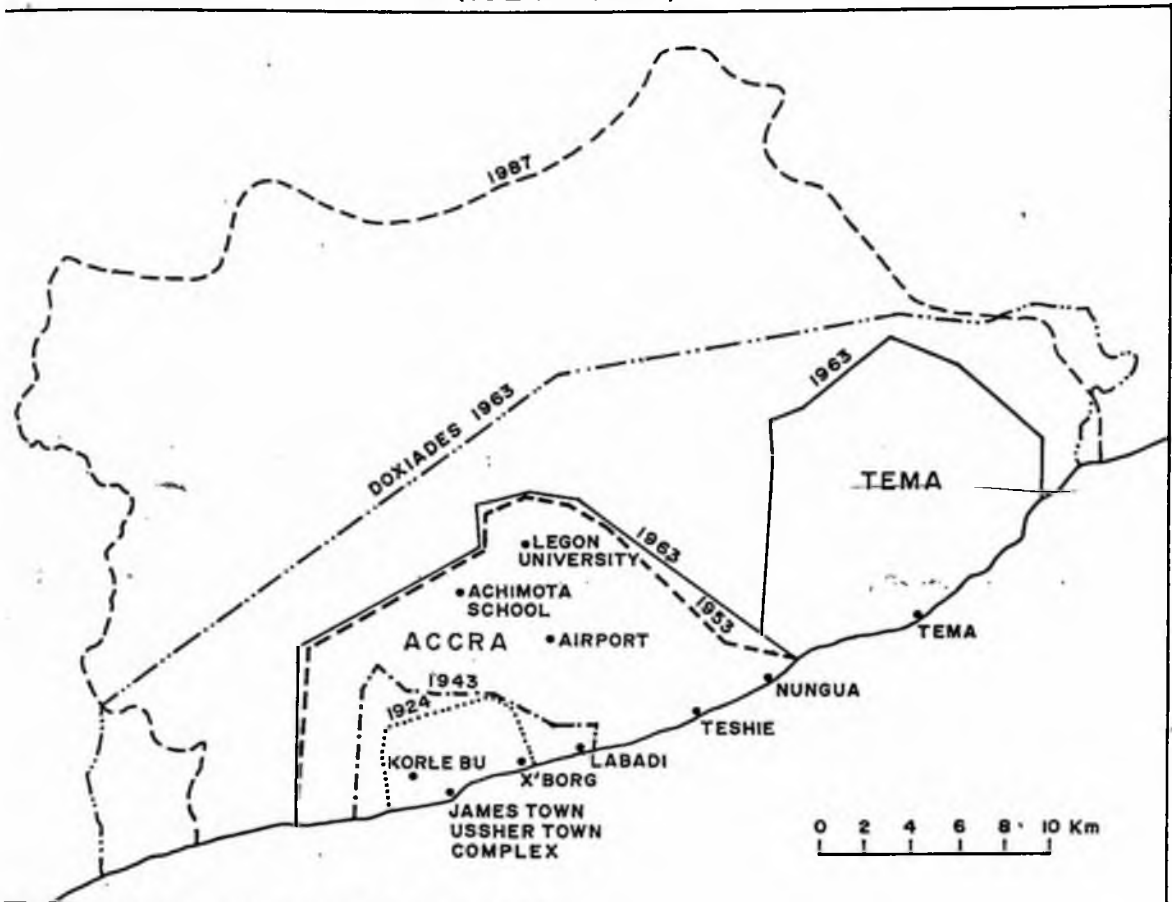
increased labour attracted to the town by the emerging industries would have to be accommodated.

It is equally important to acknowledge the fact that although the growth of Accra slackened in the late 1970s and the early 1980s due to the decline in the economic fortunes of A.M.A. as a result of a general global economic recession, the launching of the Economic Recovery Programme by the then P.N.D.C. government led to industrial and infrastructural rehabilitation programmes with its attendant inflows of Ghanaians from neighbouring countries as well as from the rural areas to Accra, thus restoring the trends in growth in terms of population and economic activities.

Another observation worth emphasizing is that the city of Accra did not have the advantage of being a wholly planned township since physical planning was introduced after the town had developed on its own and remains largely within the underbounded political boundary of the city. The urbanized area which is an outspill from the city council boundary has sprawled into what used to be called Ga rural, now the Ga District. This physical development is particularly pronounced along the major transportation routes radiating from the city centre. These are to the East on the Accra-Winneba road, North (Accra-Kumasi road) and West (Accra-Tema road). Many new developers have been attracted to these areas due to easy access and relatively cheaper land cost.

It is therefore not surprising that the political boundary of Accra had to be occasionally revised after the initial delimitation in 1924. So far, the city has seen three revisions after 1924 and these periods were in 1943, 1953 and 1963 (see Figure 8). The above notwithstanding it is important to note that the above

Fig.8 CHANGING BOUNDARIES OF ACCRA-TEMA METROPOLITAN AREA  
(1924 - 1987)



Source: Adapted from Benneh et al, 1990

revisions are made long after the population has overspilled the municipal boundary. Even today, the situation is no exception and the need for a proper demarcation of the area is long overdue.

### 3.2.1 Population of Accra

According to the 1960 population census report, Accra recorded a total population of 388,396. This increased sharply to 636,667 in 1970, given an inter-censual population of 63.8% and annual growth rate of 5.1%. The period 1970 to 1984 also witnessed a further increase in the population from 636,667 to 969,195 thus given an inter-censual change of 52.4% and a growth rate of 3.1%. (Table 3.1).

Table 3.1: Population Growth in Accra – (1960 – 1984)

Year	Population	% - Change	Rate of Growth
1960	388,396		
1970	636,667	63.8	5.1
1984	969,195	52.4	3.1

Source: Ghana Population Census, 1984.

As depicted from the table, Accra experienced a high rate of growth between 1960 - 1970. This is accounted for by the fact that the period witnessed a rapid industrialization as well as an expansion in the building, manufacturing and commercial sectors. An added impetus was the primacy of Accra as an administrative, education, industrial and commercial centre in Ghana which attracted, and continues to attract, people from all over the country thus leading to the rapid population growth trends for Accra and its surrounding settlements.

Even though population growth for Accra slackened between 1970 and 1984 recording a lower rate of 3.1%, this rate was still higher than. The annual growth rate for the extra country over the period was 2.6%

Table 3.2 gives a relative comparison of the 1960, 1970 and 1980 population figures, the densities and rate of growth in the various sub metro within the A.M.A.

Table 3.2: Population Figures, Densities and Rate of Growth in A.M.A..

Sub-Metro-politan Areas	1960	1970	1984	Rate of Growth 1960-1970	Rate of Growth 1970-1984	Pop. Density 1960	Pop. Density 1970	Pop. Density 1984
Ayawaso	87117	166.170	228.342	6.45%	2.27%	220.54%	420.7	578.1
Ablekuma	81252	129.625	256.061	4.67%	4.86%	193.92%	309.4	611.1
Asiedu Keteke	63542	66.977	75.307	05%	.08%	7.19%	752.6	846.1
Okaikoi	17206	49.278	109,519	10.5%	5.7%	46.3%	132.5	294.4
Osu Klotey	70377	104.350	112.717	3.9%	0.05%	502.7%	745.4	805.1
Kpeshie	68902	120.267	187.249	5.6%	3.16%	77.9%	136.1	211.8
Totals	388396	636.489	969.195					

Source: Ghana Population Census, 1984.

It can be seen from the table that even though Asiedu Keteke sub-metropolitan areas is the smallest in terms of its area extent (about 89 sq. hectares) it had the highest population densities for 1960 and 1984.

These figures were far above the city's averages for the periods under consideration. The reasons for such high densities are not far fetched. The Asiedu Keteke sub metropolitan area is the cradle of the development of the city of Accra. Residential areas like James Town and Adedenkpo are all ethnic Ga enclaves which had population densities of between 110 and 232 per hectare.

In fact, the high population density of Asiedu Keteke sub area presupposes that that sub metro will attract most of the basic needs facilities especially health facilities within the metropolitan area. It can also be seen from the table that the Kpeshie sub area, covering the largest area of about 884 square kilometres recorded the least absolute population between the 1970 and 1984 inter censal period.

### 3.2.2 Transportation Network of Accra

The fact that the financial constraints among other considerations will not permit the central government to provide each residential settlement all its infrastructural and basic needs is beyond dispute. Nevertheless, it is believed that the core areas which are privileged with limited facilities, can adequately serve the periphery. For the core to perform this function adequately calls for a reliable, efficient and affordable communication network in the area in question.

In fact, both regional planners and transportation geographers have stressed the importance of efficient transportation network in ensuring the effective functioning and the intimate integration of a region. In his assertion, Friedmann (1964) for instance asserted that transportation “allows for accessibility to the centre and for rapid circulation among the various parts of the city..... (It) is the nervous system of a regional organism and it is absolutely vital to its survival” Buttressing the same facts, Werner (1968) echoed it thus, “a network serving a certain region not only subdivides this region into feeder areas but at the same time provides connection between the different parts of the region.....(it) superimposes a spatial structure on the region it is serving”.

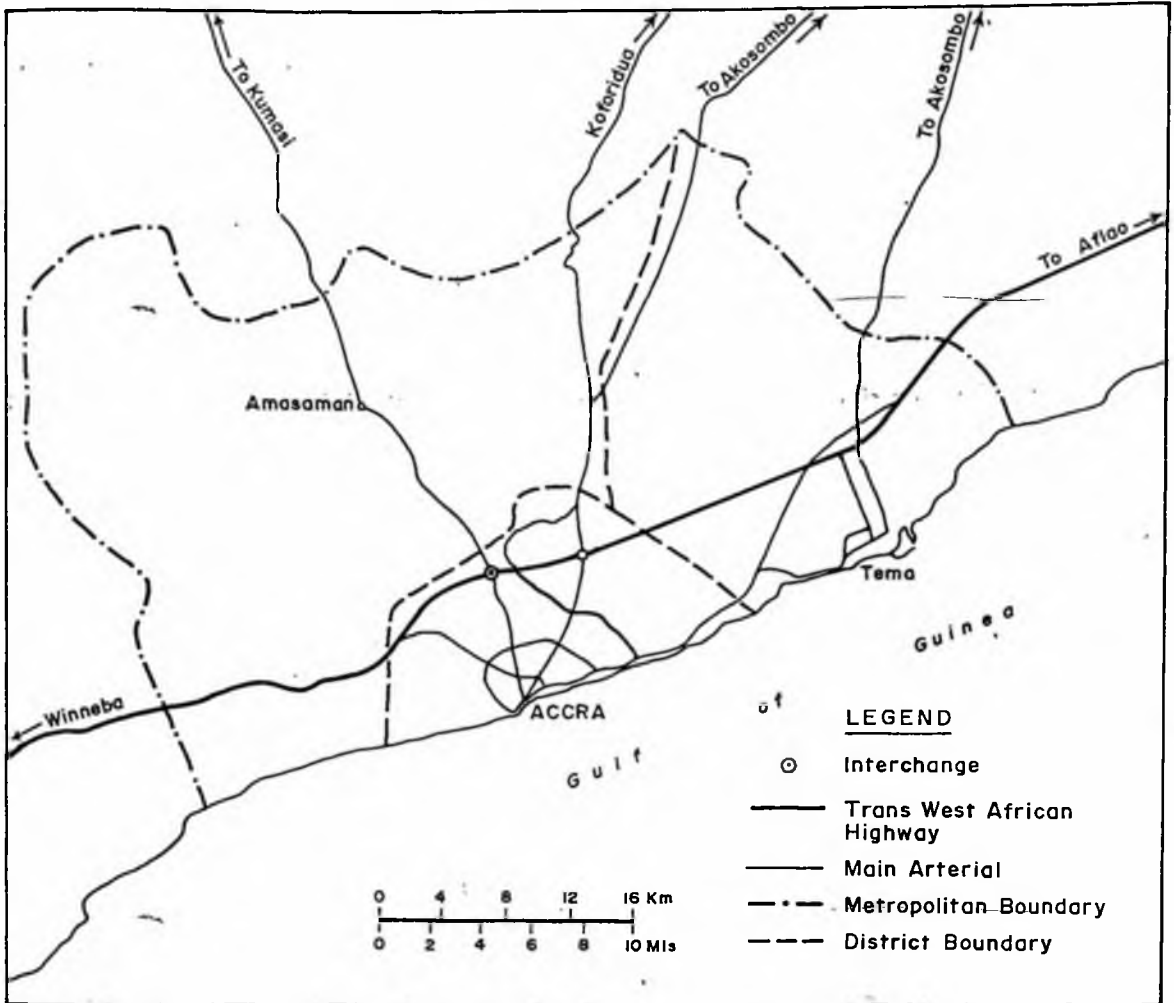
It is clear therefore that a transport pattern of any region is a reflection of how the facilities in that region in question are being utilized. Consequently, the analysis of the existing transportation network, either in term of structure or flows, should be a good basis for assessing how a particular region functions in any country.

Figure 9 shows the major road network in the city. As at 1990, the road network comprised about 550 km paved roads and 400 km of unpaved roads. Of the paved roads 75km are main arterials whilst the rest are minor arterials, collectors and local roads. These are estimated to be 300 to 400 kms of road not yet engineered or constructed.

The primary road network in Accra radiates out from the central area along the principal roads leading to the major regional centres in the country. Traffic corridors have been created between and along all major roads. The outer motorway, Achimota Road and the Ring Road are the major lateral arterial distributors of traffic to various parts of the city. There are, however, not enough east-west orbital roads across the city. Between the main corridors, there has been a network of poorly defined and constructed minor roads developed as part of an urban in-filling process.

One particular feature about the road network in Accra worth emphasizing is the fact that almost all of the main and minor arterials in the old residential areas like James Town, Osu, Adabraka, Nima and Kokomlemle had been tarred. However, it should be added that most constructed roads have currently lost the sealed surface are in varying states of disrepair due to long periods of neglect by the city authorities. The picture at the newly developing areas is even worse. Hence unplanned and uncontrolled development has led to among other things

Fig. 9 EXISTING MAIN ROAD NETWORK



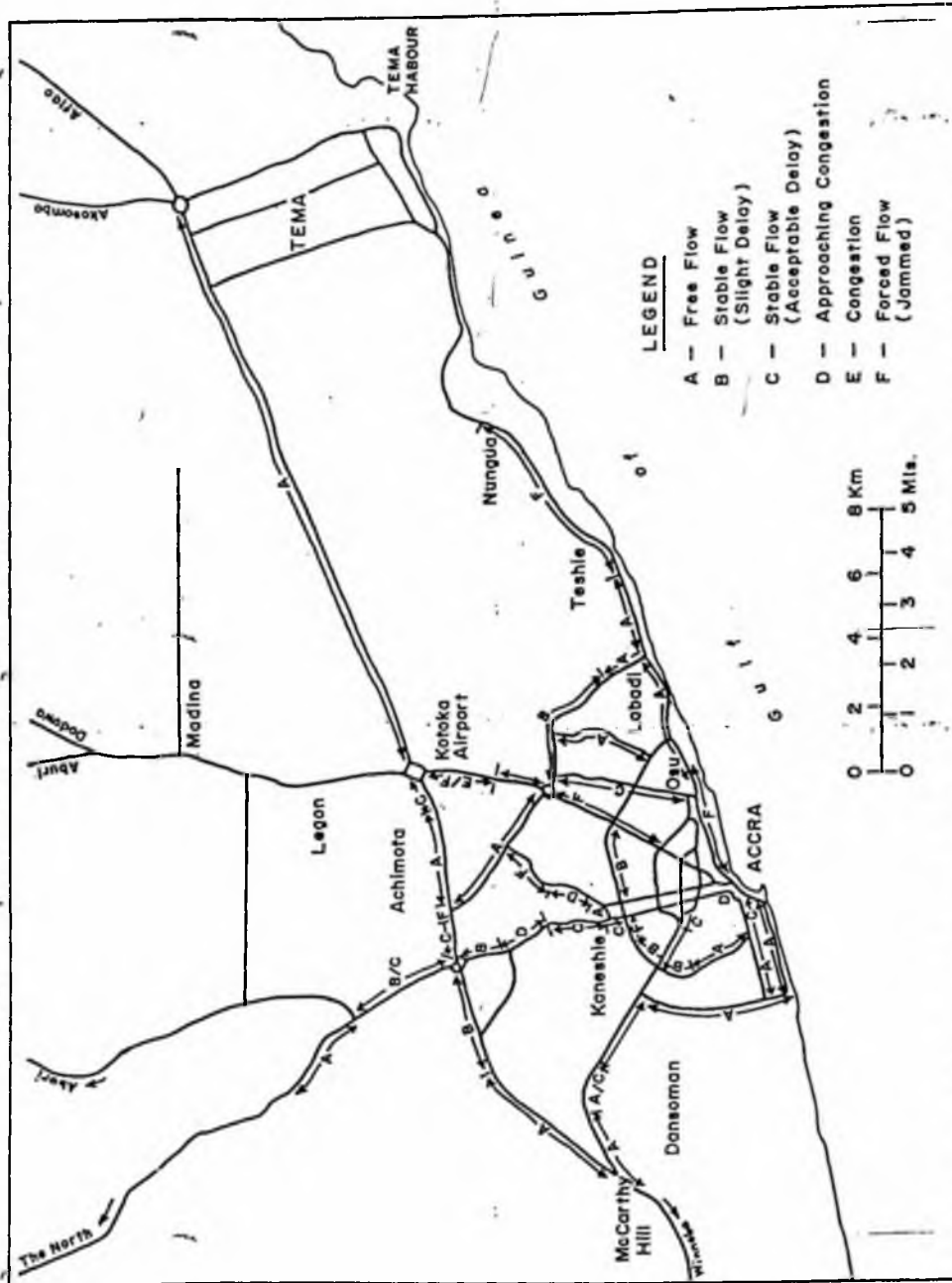
Source: Adapted from Accra Planning and Development Programme (Min. of Local Govt.) 1990.

encroachment on areas designed for road construction. Minor roads are therefore non-existent and even where they exist, are in very deplorable conditions. Examples abound in newly areas like Kwashiman, Darkuman and parts of Abeka. Another important feature of the road network of Accra is that almost all the roads are two-lane single carriageway and are therefore very narrow in width. The only exceptions are:-

- a. Accra-Tema Motorway from Tetteh Quarshie Circle to Tema  
(Tetteh Quarshie Circle to Mallam designed as double carriageway but only are carriageway constructed)
- b. Labadi Road from Osu Ako Adjei Junction to a point about 1km beyond Kpeshie lagoon.
- c. Kwame Nkrumah Avenue from Junction with Liberia Road to U.T.C.
- d. Ring Road East, Central and West to Guggisberg Avenue
- e. Kaneshie-Mallam Road from Obetsebi Lamptey Circle to Mallam
- f. Brewery Road from Obetsebi Lamptey Circle to Accra Brewery
- g. Achimota Road, and
- h. Kanda Highway from Gold house to National Electoral Commission.

The deteriorating condition of the road network has led to growing traffic congestion in the city. More and more vehicles avoid the bad roads and use the few roads which are in reasonable condition (see Figure 10). The inner city of Accra is the most congested, and one of the principal reasons is that the existing

Fig. 10 LEVELS OF TRANSPORTATION SERVICE



Source: Adapted from Accra Planning and Development Programme (Min. of Local Government) 1990

transportation and interchange system is centrally oriented and the lateral network poorly developed except for the Ring Road and the motorway.

The traffic volumes carried by the main roads are shown in Figure 11 for 1989 peak hour flows. A speed/delay study indicated that average speeds on many of the main roads in the city are about 10-15 km/hr. At times the speed is as low as 5 km/hr in some sections. This has a serious consequences on the effective functioning and the ultimate integration of the city. The situation becomes very alarming with regards to the health delivery system. This is more so in times of emergencies. Above all, the urban poor residing in the suburban and other slum areas will be tempted to use alternative sources of medication in them to avoid traffic congestions and high transportation cost, not to talk about long hours spent in long meandering queues.

It must be added that the authorities might have now realised the deplorable situation of the city's road network and have therefore started major reconstruction works on most of the major road within the metropolis. The Kwame Nkrumah Circle - UTC road is being expanded to a three-lane dual carriage whilst a three way underground interchange is under construction at the Sankara Circle. Already the Kanda King Tackie Flyover was commissioned in the last quarter of 1997.

With present spate of constructional works currently going on within the metropolis, it is believed that the transportation problem within the metropolis will be improved should the present constructional works be brought to successful and timely completion, and thus help bring the services of the limited on



scattered health facilities within the metropolis closer to those who needed them most.

### **3.3 Historical Development of Health Care Infrastructural in Accra.**

The development of health infrastructure in Accra followed more or less the spatial development of the city with the building of health facilities to serve a tempted group; or for special purposes. As at 1954, there were three general and three special hospitals in the city. The general hospitals were Korle-Bu Hospital, Achimota Hospital and the Ridge Hospital. The special hospitals were the Princess Marie Louise Children's Hospital, Korle Bu Maternity Hospital and the Mental Hospital.

The Achimota Hospital, for example, was started to cater for the staff, their families and the pupils of Achimota Secondary Boarding School. In addition it was to serve the people living in the surrounding villages and the northern sections of Accra as well. The Ridge Hospital on the other hand was originally called the European Hospital, for it catered exclusively for Europeans and was built in the old European residential area. In 1946, it ceased to be discriminatory on the grounds of race but remained a hospital for the richer class or people serving patients in the Senior Civil Service and their families (both African and European), all other Europeans and well-to-do Africans, Lebanese, Syrians, Indians and Americans (Acquah, 1954).

The Princess Marie Louise Children's Hospital catered solely for young children whilst the Mental Hospital took the most serious cases of mental disorder and also criminal lunatics from the country as a whole. In addition to these health

facilities, the army authorities in Accra had their own medical services for officers and their families.

### 3.4 Current Health Care Infrastructure in Accra

Table 3.3 gives the manpower on payroll of the Ministry of Health as at April, 1996

Table 3.3 Regional Distribution of Medical Officers, Dentists and Professional Nurses

Region	Medical Officers	Dentist	Professional Nurses
Ashanti Region	(5)	(5)	(7)
Brong Ahafo Region	(5)	(5)	(4)
Komfo Anokye Teaching Hospital	(19)	(17)	(8)
Western Region	(5)	(12)	(7)
Greater Accra Region	(44)	(45)	(4)
Volta Region	(5)	(2)	(8)
Eastern Region	(7)	(7)	(10)
Central Region	(4)	(5)	(7)
Northern Region	(2)	(2)	(6)
Upper West Region	(2)	(2)	(3)
Upper East Region	(2)	0	(2)
TOTAL	(N) 1,052	42	5,728

Source: Ministry of Health Bulletin. 1997

The above table clearly demonstrates the dominance of Greater Accra Region in general and A.M.A. in particular in the distribution of health facilities in the country. The region had 44% of the total medium precaution in the country in 1996 with the Korle Bu Teaching Hospital alone having as much as 30% whilst the whole of Northern, Upper West and Upper East Regions had 2% respectively. A similar pattern is exhibit in the distribution of dentists and nurses as shown in the table.

The public sector alone cannot bring about changes needed to make accessible health care to the people. Other providers of medical services in the city of Accra are the private, mission and quasi government as well at the traditional health practitioners. Mention could also be made of certain health providers like dispensaries and traditional birth attendants which are all key players in the health delivery system but time and financial constraints would not permit the present study to delve into those sectors.

### **3.5 Distribution of Health Facilities in A.M.A**

#### **3.5.1 Public Health Facilities**

In 1996, there were a total of 25 public health facilities operating in the city of Accra apart from the Korle Bu Teaching Hospital. Of these, 6 were hospitals, 7 polyclinics and 9 clinics and 3 maternity homes/health posts. These are unevenly distributed in the six sub-metropolitan areas.

These public health facilities are supposed to operate within a framework of pyramidal referral system where patients are to be referred from the lowest level

(i.e. the health post) through polyclinics to the general hospitals and finally to the Korle Bu Teaching Hospital which also engages in research and advanced training. Besides, patients are often referred between facilities and staffing of the same category depending on their quality of equipment.

The historical development of the city of Accra has influenced the distribution of health facilities within the city. Initially health services were concentrated in the Central Business District (CBD) of the city. This includes the major hospitals and the clinics. The two centrally located sub-metropolitan areas of the city (the Asiedu Keteke and Osu Clotey) have 48 percent of the public health units. Table 3.4 gives a summary of the distribution of health facilities in the various sub metropolitan areas.

Table 3.4: Distribution of the Health Facilities by Sub metropolitan Areas in A.M.A.

Sub-metro	Estimated Population (1)	Area Extent (Sq. km) (2)	Population Density (3)	Public Health Facilities (4)	Private Health facilities (5)	Traditional Health facilities (6)
Kpeshie	286,970	884	324.6	12	11.48	5
Okaikoi	340,170	372	914.4	4	11.48	15
Osu Clotey	177,800	140	1,270	32	24.59	7
Ayawaso	287,870	395	728.78	24	27.81	39
Asiedu Keteke	104,850	89	1,178.42	16	4.09	8
Ablekuma	318,570	419	760.0	12	20.4	39
Total	1,516,260	2,299	659.3	100	100	113

Source: 1, 2 Ghana Population Census – 1984  
 2, 3, Survey Department – 1997  
 4, 5 District Coordinating Unit - 1997  
 6 Accra Metropolitan Assembly – 1997.

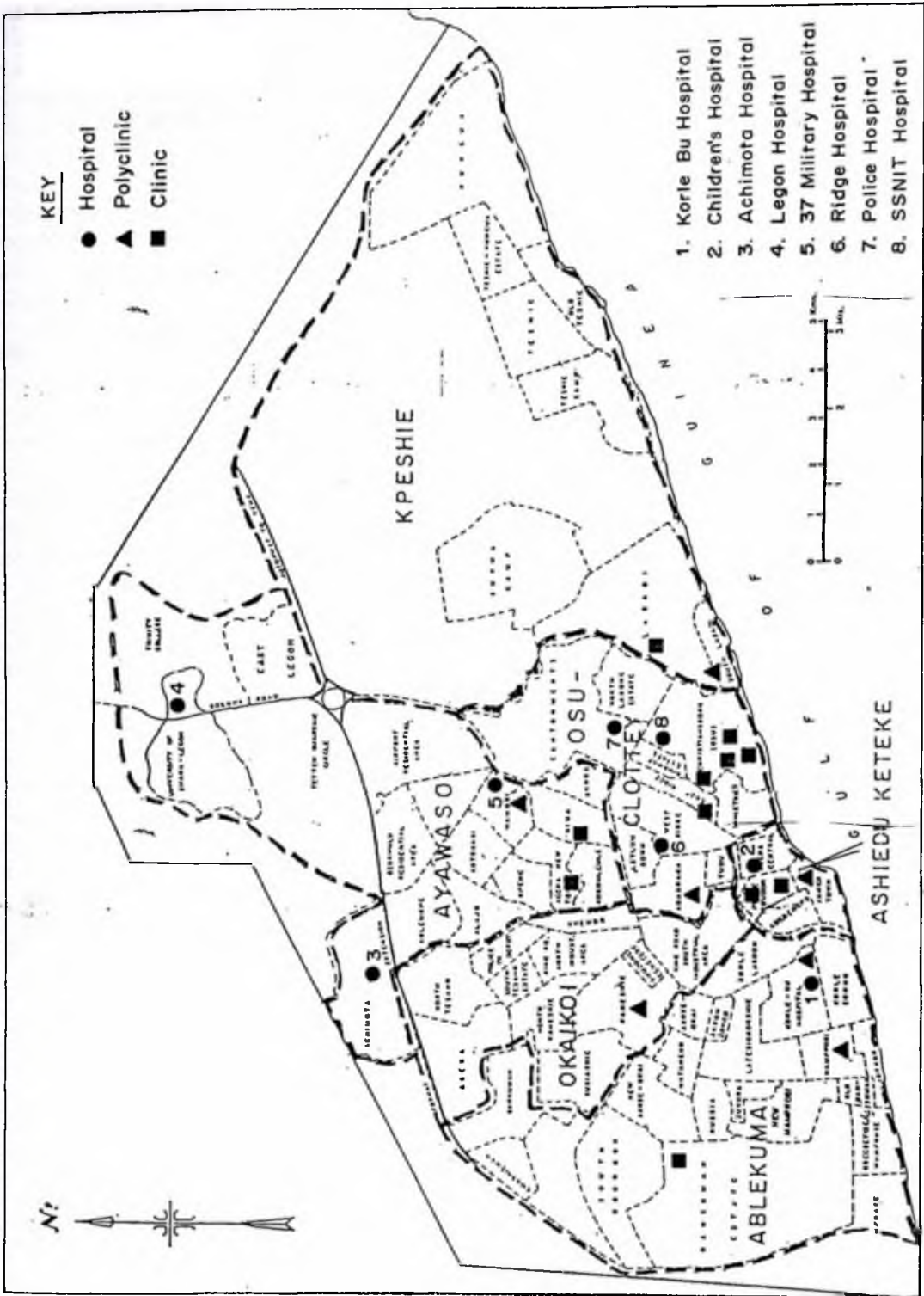
The expansion of the city to the zones and suburbs has created uneven distribution of health services compared to the total population they serve. Those few facilities located outside the CBD will have a higher utilization rate since they will serve a growing number from the suburbs. Okaikoi, the most populous sub metropolitan area has only 4 percent of public facility which is supposed to serve

an estimated 22 percent of the population within the metropolis. The same gloomy picture can be painted of the situations in Kpeshie and Ablekuma sub metropolitan areas both of which harbour the newly developing areas. Such areas which are apparently deprived of health facilities make the cost of providing the services in form of higher transport costs and longer waiting time. In such circumstances, some patients may be attracted to the CBD to see medical services in the less competed facilities or may rely on other substitute but complementary facilities available. Figure 12 is a graphical presentation of the various public health facilities within the metropolitan area.

### 3.5.2 Private Health Facilities

The distribution of private health facilities within the metropolitan area is relatively fair compared to that of the public facilities. It is however worth noting that even here, the distribution is skewed in favour of the medium to high class residential areas. Ayawaso and Osu Clotey have about 28% and 25% of private clinics respectively. The Ablekuma sub metropolis which is also fast becoming a high class residential area including Dansoman and South Odorkor estates also has 25 clinics. The Okaikoi and Kpeshie had 14 each. This significant improvement compared to that of the public one can be explained in two ways. Firstly, both areas have seen several developments in recent years. Infact, the current expansion in A.MA is within these two directions. This, coupled with inadequate public health facilities within the areas, has attracted private investors who are profit oriented. It appears that the concentration of the private hospitals at high class residential areas are therefore aimed at targeting the elite group who have the resources and means to patronise the services of these facilities.

Fig.12 DISTRIBUTION OF PUBLIC HEALTH FACILITIES IN ACCRA METROPOLITAN AREA



Source: Office of District Coordinating Unit, 1996.

elite group who have the resources and means to patronise the services of these facilities.

### 3.5.3 Traditional Health Practitioners:

The distribution of traditional health practitioners within the municipality varies directly with the distribution of private health facilities. Whilst most private clinics are concentrated in the high and medium residential areas, traditional health practitioners tend to concentrate in the slum and low residential areas. At the Ayawaso sub metropolitan area, about 29.5% of the existing traditional practitioners are concentrated at Nima, Accra New Town, Maamobi and Kotobabi. All these areas are well known low class residential areas, with very high population densities, poor sanitary environments, occupied by mostly immigrants from far and near. The same story goes for the Okaikoi sub metropolitan area where Abeka alone has 60% of the registered traditional health practitioners. The picture is further buttressed by the observations in the Ablekuma sub area. Most of the Traditional Health Practitioners (THP) are concentrated in Kwashiman, Odorkor, Darkuman, Korle Gonno and Awoshie, all of which are relatively low income and/or newly developing areas.

One should not lose sight of the apparent non-existence of the THP in the high class residential areas. Areas like Airport residential, Kanda, Cantonments, West Ridge, North Labone and the like are all out of the list. East Legon has only one of the many T.H.P. in the Ayawaso sub metropolitan area. This is not to suggest that T.H.P. do not operate within these high class residential areas. Although some may be operating under cover, the fact that they are not registered with the authorities goes to buttress the point that they are either unpopular within such

vicinities or their contribution to the general health delivery in these areas is insignificant.

The reason for such a phenomenon may be varied. However, one fact remains indisputable. Many residents in such areas are highly educated well-to-do individuals whose perception about traditional medicine remains skeptical although many may clandestinely be using it concurrently with orthodox medicine. These observations are however tentative and subject to analysis in the subsequent chapters.

The chapter has attempted to throw some light on the study area. These observations were particularly identified;

- a. The population distribution in A.M.A. is uneven. There is a high concentration of population in the old settled areas (i.e. in and around the C.B.D.) with population density of about 1,270 and 1,178 in Osu Clottey and Asiedu Keteke sub metropolitan areas respectively as compared to the metropolitan average of 659 persons per square hectare. It can therefore be inferred that if the distribution of health services within the metropolis is based on population distribution, one should expect a clustering of such facilities in the densely populated areas.
- b) An equally important revelation is the fact that the road network within the municipality are inadequate and one in deplorable condition, thus creating congestion in the municipality especially in the C.B.D.

The newly developing areas around Kpeshie, North of Ablekuma and Okaikoi are particularly poorly served with roads. The average speed on many of the main

roads is about 10 - 15km/hr. It can therefore be inferred that inhabitants in the less accessible areas will have to pay more for health in terms of cost and time.

It is also important to acknowledge the fact that the foregoing has amply demonstrated that whilst public health facilities are concentrated in the old settled areas, the private ones are located in the high class residential areas. The traditional health practitioners are concentrated in the new developing residential areas. It should however be emphasized that these observations are tentative and subject to analysis in the subsequent chapters.

## CHAPTER FOUR

### ACCESS TO HEALTH SERVICES IN ACCRA

#### METROPOLITAN AREA

##### 4.1 Introduction:

The previous chapter examined the study area in terms of its growth and the available health care resources/facilities. The results make clear that significant changes have taken place within the areas under study, although these changes varied from one area to another. This chapter will assess access to health facilities within the study area based on the empirical data collected from the field. In discussing or assessing accessibility and utilization of health care services, several factors come into play. These include economic, political and the socio-cultural characteristics of the people.

In order to achieve the set objectives therefore, structured and open ended questionnaires were administered on the heads of selected household and some patients at selected residential areas and some health facilities within the study area. The questionnaires were designed to collect information on what type of facility will be used by what kind of people for what health problems.

According to the research design, the samples were based on the residential areas using the population density as a criterion. The selected health facilities were also chosen based on the outpatients workload, after they have been stratified. Due to time and financial constraints, some of the health facilities like pharmacies and soothsayers which are also part of the general health delivery system were not included in the sample. Nevertheless, the study hopes to provide information

which will help assess the general health care delivery system within the metropolis.

This chapter is divided into two main parts. The first part examines the various factors influencing access to health facilities using cross tabulations. Finally the chi-squared is employed to ascertain the relationships between the variables and utilization of health facilities within the metropolis.

#### **4.2 Economic Dimension of Access**

The effect of economic constraints on the utilization of health facilities have long been attested to by many researchers (Phillips, 1990; Opong & Hudson, 1994). In theory, the publicly funded health care is supposed to be free or provided at very nominal user charges. Nevertheless, in virtually all systems, there is a certain usage of private health care and this is particularly true of better-quality modern care or traditional medicine.

It is important to note that there is always the tendency to consider the cost of using health care merely in terms of immediate user charges. However a more realistic assessment of the actual cost of any goods or services is given by the "opportunity cost", the cost of other goods or purchases that must be forgone in order to purchase them.

The opportunity of using a health facility therefore involves the cash paid out for charges, drugs and transport, and the value of time (which may be considerable, involving travel, waiting and traffic congestion especially in a third World city like Accra) expended on the visit. Akin et al (1985) buttressing this fact pointed out that the opportunity cost of using free government health services is still generally positive as may be higher than using the alternatives. They further

generally positive as may be higher than using the alternatives. They further suggest that the opportunity cost of seeking medical care is approximated by the sum of the price paid to reach the facility, the price paid for the service and the price for any medicines. It therefore goes without saying that the cost of health care has two components; a cash monetary cost and an indirect (nonpecuniary) cost in terms of time.

#### 4.2.1 Cost Recovery (User fee) and Access.

In pursuance of its economic recovery program, the government instituted some measures that have direct and indirect implications for health development in the country. Tailored to meet western donors “conditionalities”, the ERP rejects the principle of subsidies. Consequently, the government has phased out price subsidies on most public services including health.

One significant offspring of the strict adherence to the phasing out subsidies on public utilities/services and health in this particular instance is the introduction of the user fee in 1983. It therefore came as no surprise when in the 1983 budget the nominal fee of 50 pesewas (one cedis is 100 pesewas) per day (open wards) was increased to ₵7.50 for adults and ₵5.00 for children, while patients at the amenity wards were asked to pay ₵25.00 per day instead of ₵10.50. In 1985, the hospital fees were increased again by 800 to 1,000 per cent.

Although the introduction of user fees brought some improvement in the drug situation and other essential services, it also brought untold hardship to many especially the urban poor and the rural dwellers. The problem worsened in the 1990's with the introduction of the cash and carry system. Coupled with this is

the escalating fees being charged at the various clinics. Table 4.1 indicates the user fees of some health facilities with the study area.

Table 4.1: Consultation Fees (cedis) - 1997

	First Visit	Follow up Visit
Public Hospitals		
General Consultation	2,000.00	1,000.00
Specialist Consultation	10,000.00	5,000.00
Public Polyclinic	500.00	500.00
Public Clinics	400 – 500.00	200.00
Private Clinics	5,000.00	3,000.00
Private Hospitals		
General Consultation	12,500.00	8,000.00
Specialist Consultation	27,500.00	15,000.00
Traditional Health Centre	8,000.00	8,000.00

Source: Field Survey, 1997.

The table clearly shows a sharp increase in hospital fees some rising as high as 5,000 percent as in the case of first time specialist consultation. It is worth noting that this does not include fees for drugs, laboratory tests, radiological examinations, medical and surgical treatment among others which hitherto were all inclusive in fees charged. One would not deny the fact that these fees being charged have brought some sanity into the health system. However, one thing stands clear, that accessibility of public care services to low-income urban dwellers has been considerably affected.

The Table also gives a summary of fees charged by the various health facilities sampled within the study area. It is quite obvious that fees charged at public health facilities are far cheaper than those charged by other health providers. And even in the public sector, there are also some variations. Sampled clinics charge between ₵400.00 - ₵500.00 for a first visit and ₵200.00 for a follow up visit. The polyclinics charge a uniform fee of ₵500.00 for both first and follow up visits. In the Public Hospitals, ₵2,000.00 is charged for a first visit and ₵1,000 for a follow up visit.

It is also important to note that the reasons for these fee differentials in charges at the public facilities are varied but the most important being a deliberate attempt by the Ministry of Health and the Government for that matter to ensure that the referral system of the health care delivery system works. This system aims at ensuring that minor cases are treated at the lower levels of health system (i.e. health post/clinics) and that serious cases are referred to the polyclinics, regional hospital, thus making the Teaching Hospitals attend to more serious referral cases. The system, it is hoped, will help decongest our hospitals and more importantly bring health care within the means of the masses of people who are generally poor.

It must also be added that some of the sampled hospitals and clinics, precisely the Police Hospital and Castle Clinic provide free medicare to its employees (i.e. the police and military respectively) and therefore, even though some of their users may be financially sound, they take advantage of its free services coupled with at times preferential treatment offered them to use such facilities.

Table 4.3 also depicts traditional practitioners as charging a uniform fee of ₵8,000.00 upon any single call. One important observation noted here is that unlike the orthodox medicare whose charges do not cover the supply of drugs, the fees charge here cover everything including drugs. Thus the adherents of traditional practices will be more attracted to these facilities since one is guaranteed cheaper fees which can be paid in kind or cash plus the supply of drugs.

#### 4.2.2 The relationship between Choice of a Health Facility and the Approximate Monthly Income of Respondents.

Table 4.3 gives a summary of the relationship between the choice of a particular health facility and the approximate monthly income of respondents.

Table 4.3: The Relationship between the Choice of a Facility and Approximate Monthly Income of Respondents. (%)

Type of facility	Range of monthly income (cedis)				
	Below 100,000	100,000 – 200,000	200,000 – 300,000	300,000 – 400,000	Above 400,000
Public Facility	50	65.3	52.4	21.1	
Private Facility	35	31.7	42.9	78.9	100
Traditional Facility	15	3	4.6		
TOTAL	100	100	100	100	100

Source Field Survey 1997.

Of the total number of residents interviewed, 50% of those earning less than ₵100,000.00 a month used public health facilities, 35% used private one whilst

only 3% use traditional health care. It is important to explain that the apparent high percentage of 35% of the group using private clinics can be accounted for among other things, by the fact that most of the well-to-do people prefer making their partners become housewives and therefore earn no income. That notwithstanding, they can afford the charges at the private clinics. Above all, most institutions have adopted some of the private hospitals where treatment is given to their employees and family and at times, their househelps and watchmen at the expense of the institutions concerned irrespective of one's income. These include parastatal companies like the Ashanti Goldfields Company Limited and some Banking Institutions which provide free medical services to employees and dependants.

It is interesting to note that 78.8% of all those earning above ₵300,000.00 a month use the private facilities. All those earning above ₵400,000 use private medicare. It is clear from the foregoing that as one's income improves a deliberate and conscious shift is made from the use of public facilities to private ones irrespective of distance.

The above observation is further buttressed by data collected from some outpatients in some selected health facilities (public, private and traditional).

Table 4.4 gives a summary of the approximated monthly income of the outpatients of the selected health facilities.

Table 4.4: Relationship between Income and the Use of Facility by Outpatients

Type of Facility	Range of Monthly income				
	Below ¢100,000	¢100,000- ¢200,000	¢200,000- ¢300,000	300,000- ¢400,000	Above ¢400,000
Government Clinic	33.3	21.6	5.2	-	16.7
Government Polyclinic	14.3	13.7	15.5	-	-
Government Hospitals	9.5	41.2	31.0	10.0	-
Private Clinic/Hospital		13.7	34.5	70.0	75.0
Traditional Health Practitioners	42.9	9.8	13.8	20.0	8.3
TOTAL	100	100	100	100	100

Source: Field Survey, 1997.

The data in Table 4.4 confirmed low income to be a strong barrier to the utilization of modern primary medical facilities even when publicly provided. Almost all interviewed at the various public health facilities earned a monthly income of ¢300,000 or less. An exception here is at the clinic where 16.7% earned above ¢400,000.00, a situation which has already been explained.

It is also clear from the table that the relatively well-to-do were spending more on, and using more heavily, the services of trained physicians. Only 8.3% of the upper income group (above ¢400,000) attended traditional health centres. This apparent high percentage of those within this income group using clinics can be

explained by the fact that some of the clinics visited (precisely the castle clinic) provides free medicare to all its employees. Above all, since it is serving primarily those working at the seat of government, it has been relatively well equipped in terms of staff and other medical infrastructure. Hence, most 'prominent' workers would not mind seeking medicare attention.

The same can be said for the use of health services by pregnant women in the study area. Less than one percent of the respondents, an insignificant proportion of the upper income group (above ₵400,000), were examined by T.B.A. compared with 39 per cent of the lower income group (below ₵100,000). Interestingly, practically all deliveries were attended to by a practitioner of some kind. Although 80.5 percent of deliveries were by physicians, at least 18.3 percent were by traditional midwives and 1.2 percent took place in the houses and prayer camps usually located around the peri-urban areas like Awoshie, Kwashiman, North Odorkor and Nungua in the Ablekuma and Kpeshie sub-metropolitan areas respectively where health facilities are non-existent or limited.

A very important observation here is the fact that people tend to substitute the public sector with the private as and when their income improves. In other words, income is a very important determinant of what health facility to use. It shows that the data in this study are not an exception to the problem of income influencing access to health facilities in Africa (Mwabu 1986). This suggests that factors other than direct costs were influencing behaviour and they appeared to include quality of treatment, confidence and accessibility. It also points to the need to incorporate non-governmental health care, the major sector of care, into the health care system to increase the official coverage of health services.

The data show that 55.8% out of the total respondents holding managerial positions use private hospitals. This confirms earlier observations that those with better income prefer quality health services which is believed to be better attained at the private clinics/hospitals. An equally interesting observation from the data is the relatively high representation of 16.3% of this group at the Traditional health centres. This demonstrates the fact that the traditional sector is being patronized by people from a broad spectrum irrespective of income.

One important observation here is the relatively high representation of drivers using private clinics. In fact, even though the fees charged at these private clinics have been noted to be exorbitant, they would prefer their services to going to public clinics where one would have to wait for hours before being attended to. One thus sees an element of time influencing the use of health facility. The distribution of labourers is concentrated around government clinics (50%), government hospitals (40%) and traditional health centres (10%). This is to be expected since their income cannot apparently suffice high fees at the private clinic.

The results of the Chi-square ( $X^2$ ) analysis based on the data in Table 4.5 shows the calculated chi-square value as 72.26 and the corresponding critical value of 13.8 at 95% level of confidence. Consequently the null hypothesis ( $H_0$ ) is rejected. It can therefore be inferred that there is a statistically significant association between the use of a particular health facility and one's occupation.

### 4.3 Social Dimension of Access

#### 4.3.1 Relationship between Utilization of a Health Facility and Educational Status:

As has been asserted already, education can be to a larger extent influence which health facility to use at what time. Table 4.8 gives a summary of the relationship between the use of a health facility and the educational status of respondents.

Table 4.6: Relationship between the Use of a Health Facility and the Level of Education.

Education Status	Public Health Facility	Private Health	Traditional Health
Primary	11.5	.9	37.5
Middle/JSS	33.1	21.1	37.5
Secondary/Comm.	34.5	27.5	
Post Sec/Training	13.7	13.82	12.5
Higher Education (e.g. University).	5.0	34.0	
None (illiterate)	2.2	2.8	12.5
Total	100	100	100

Source: Field Survey, 1997

The data show that out of the total number of respondents using the public health facilities, 79.1% had attained either primary or secondary education, (i.e. 11.5% had primary education, 33.1% has middle level, and 34.5% had secondary education). Only 5% of the respondent had a higher or university education, 2.2% had no education at all. The data seem to confirm that the less educated households are more likely to demand more curative medical attention because of the likelihood of greater incidence of infectious ailments. This is, however, strongly related to home environment, household income, family size and

nutrition. The independent effects of education are difficult to distinguish although, today as has been rightly noted by Phillips (1990), the education levels of mothers, and particularly female literacy rates, are generally strongly related to levels of infant mortality, effective feeding and good use of health services.

With those using the private facilities, 49.5% had up to a secondary level education, 13.8% had post secondary level whilst as much as 34% of them had higher education. With those using the traditional health facilities those who have had primary and middle level education stood at 37.5% each whilst Post secondary and those with no education were 12.5% each. None of the respondents with higher education used traditional health facility.

The above observations was confirmed by data from outpatients from the various health institutions as depicted in Table 4.7

Table 4.7: Educational Background of Outpatients Respondents.

Level of education	Health Facilities				
	Public Clinic	Public Polyclinic	Public Hospital	Private Clinic/Hospital	Traditional Health Care
Primary	14	12.2	11.5	3.9	10
Middle/JSS	34	51.2	26	13.6	30
Secondary/Comm/Tech	38	12.2	42.3	47.6	40
Post Secondary	0	4.9	11.5	15.6	17.5
Higher Education	2	7.3	3.8	16.5	2.5
Non	12	12.2	4.8	3.9	-
Total	100	100	100	100	100

Source: Field Survey, 1997.

Two important deductions can be drawn from the above. One, the distribution does not support the assertion that those with little or no education use the traditional health facilities. They were well fairly represented with about 60% of respondents at all the levels of health facilities having attained secondary and above education. Secondly and more importantly, the fact that those who have

attained a higher education have a representation of 2.5% at various traditional health centres visited but none of the respondents at the residential areas with the same level of education indicated their use of the services of the traditionalist indicate that even though many more educated may be using their services, (either exclusively or in conjunction with the orthodox health care) they are reluctant to disclose as such for fear of being seen as being “backward”.

The data in Table 4.9 was further examined by the use of the chi-square ( $X^2$ ) test of significance in an attempt to establish the significance of association between the use of a particular facility and the educational background of respondent. The null hypothesis, ( $H_0$ ) in this regard is that there is no significant relationship between the use of health facility and the categories of educational levels recognised. Since the calculated chi square ( $X^2$ ) value of 99.43 is greater than the critical value of 26.5, the null hypothesis is rejected in favour of the alternative hypothesis ( $H_A$ ) at 95% level of confidence. Consequently it is asserted that there is a significant association between the use of a particular health facility and educational background of respondents. This implies that the higher one's educational background the higher the possibility of one using a more “sophisticated” health facility.

#### 4.3.2 Relationship between Utilization and Length of Residence

Table 4.8 gives a summary of the use of a particular health facility and the period one has stayed in Accra.

Table 4.8: Relationship between Utilization of a Facility and the Length of Residence.

Type of Health facility	Number Of Year in Accra			
	Less than a year	Between 1-4	Between 5-10	Over 10 years
Public Health Facility	13.2%	(2.2%)	(6.6%)	(78.9%)
Private Health Facility	1.9%	(0%)	(14.8%)	(83.3%)
Traditional Health Facility	28.0%	(52.0%)	(0%)	(20.0%)

Total Field Data 1997

As can be seen from the table, about 80% of respondents using the public health facilities have stayed in Accra over 10 years, 6.6% of respondents have stayed in Accra for between 5 – 10 years, 2.2% between 1 – 4 years whilst 13.2% had been in Accra less than a year. Worth commenting on is the representation of the two extremes, i.e., those who have lived in Accra less than a year and those who have lived in Accra for over 10 years. Since the study focuses mainly on the urban poor, much attention was given to residents of the low class residential areas where most of the indigenous Gas stay. On the other hand, the recent upsurge in rural-urban migration has brought into the city many unemployed youth to the city in their bid to seek greener pastures. The many under employed and “kayayoes” shoeshine boys and dog-chain and petty traders cannot meet the relatively high fees charged at the private clinics, hence they tend to use the public facility which is comparatively cheaper. The same explains the 28% of respondents in the same category using traditional health facility. Thus many of these ‘new comers’ who have no proper residential accommodation tend to peri-urban area where public health facilities are non-existent. They thus make do

with the traditional centres where charges are moderate and the supply of drugs is also guaranteed.

#### 4.4 Physical Dimension of Access

##### 4.4.1 Relationship between Utilization and Distance from Residence

Table 4.9 gives a summary of the number of patients to the various health facilities under consideration and the distances they covered. The table tends to confirm a more or less gradual fall-off in utilization rates over distance although the steepness of decline varies considerably from facility to facility.

Table 4.9: Relationship between utilization and distance to Facility.

Distance in Kms	Clinic	Polyclinic	Govt. Hospital	Private Clinic	Traditional Centre
	% of total Respond	% of total Respond.	% of total Respond	% of total Respond.	% of total Respond
Less than 1	44	25.0	21.2	12.6	25
1 - 3	26	25.0	33.7	31.6	30
4 - 5	16	15.0	33.7	24.3	17.5
5 - 8	10	15.0	10.6	25.2	17.5
8 - 10	4	7.5	1.0	5.8	2.5
Above 10	0	12.5	0	1.0	7.5
Total	100	100	100	100	100
(N)	(54)	(44)	(103)	(92)	(44)

Source: Field Survey, 1997.

At the government clinics, out of the 50 outpatients, 70% fall within the radius of 3 kilometres, and as much as 96% fall within the radius of 8 kilometres radius. None had travelled beyond 10 kilometres for the services at the clinic. This means that the clinics have a maximum travel threshold, and once this is exceeded, utilization may fall off considerably.

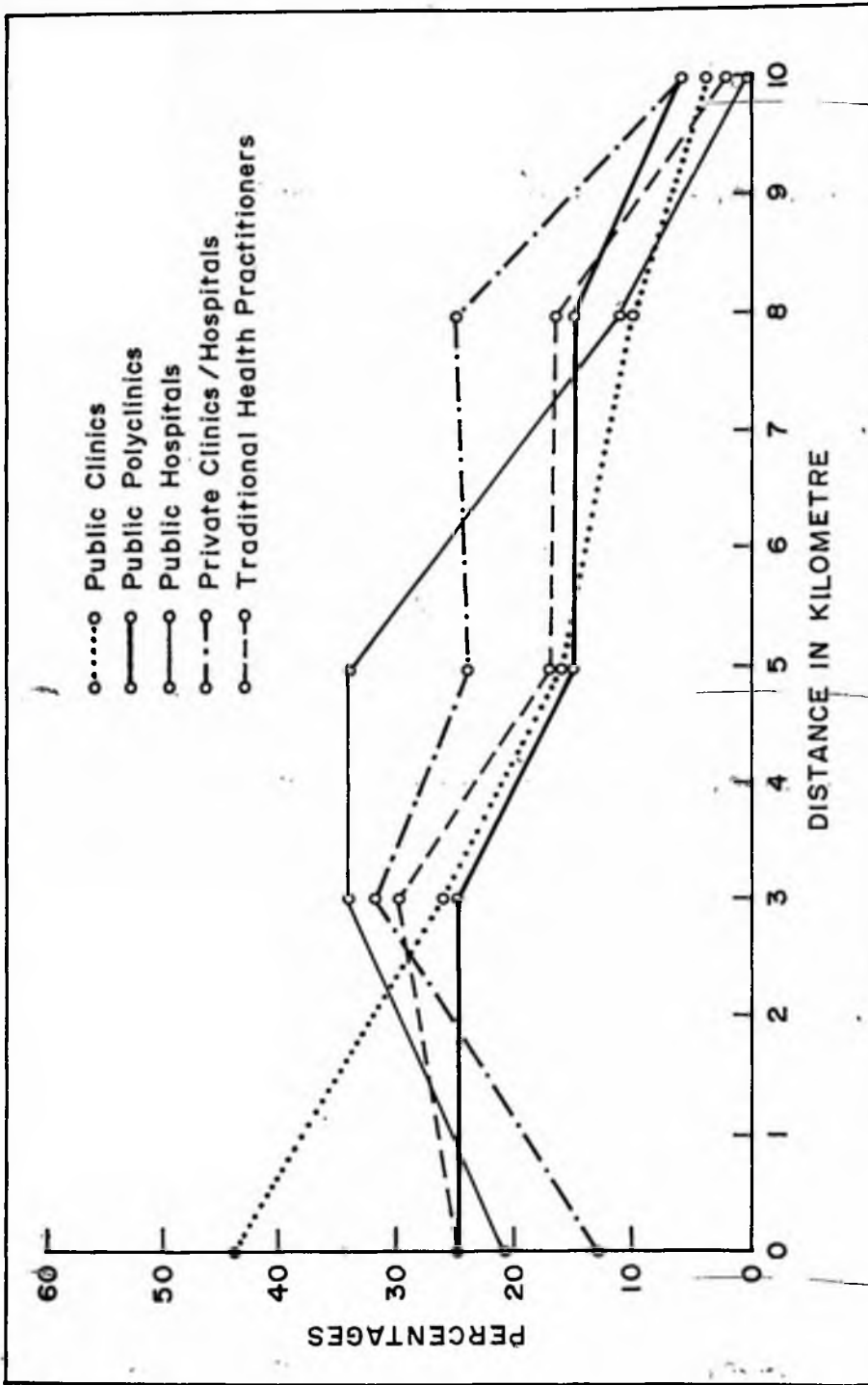
At the government polyclinics, the same negative relationship was observed but the rate of change was lower than what was observed at the clinics. Whilst 50% of patients fall within the radius of 3 as much as 12.5% fall outside the 10 kilometre radius. This can be accounted for by the fact that some of the polyclinics visited perform exclusive services patronized by patients from far and near. The Adabraka polyclinic for example is one of the few polyclinics which give C.S.M. vaccine. Moreover, the Kaneshie Polyclinic is the only public health facility within the Okaikoi sub-metropolitan area which has an estimated population of about 340,170, and a population density of about 914.4 far and above the metropolitan average of 659.3 per square hectare

Data from the government hospitals show an initial rise in patients with distance from 22 to 35 up to the 5 kilometre radius before declining. This could be attributed mainly to the government's referral health policy which allows for the transfer of more serious cases from bottom to the top. Hence, those with relatively serious ailments are expected to travel longer distances for treatment at the various hospitals.

Unlike the public health facilities, the private clinics had a wider catchment area with 32% of the patients travelling over five kilometers for treatment. Patients' willingness to travel far for quality services is quite evident here.

The observation at the traditional health centres portray a similar pattern as observed under the private hospitals. About 8% of patients had travelled well over 10 kilometres for treatment. In terms of distances travelled therefore there was no marked distance decay. The reputation of the traditionalist may account

Fig. 13 RELATIONSHIP BETWEEN UTILIZATION OF HEALTH FACILITIES AND DISTANCE



It is interesting to note the socio-economic differentials in distance decay in terms of the spatial behaviour of residents within the metropolis. The residents from the high status sites are often travelling considerable distances to reach expensive private clinics in the city. By contrast, poorer residents in many sites are using locally available public health centres. This observation has been noticed by Bailey and Phillips (1990) in their study in Kingston, Jamaica. It is however, dangerous to generalize, that as the better-off residents living nearer the business district or the city centre have ready access to local private practitioners for health care, their poorer neighbours living in the peri-urban areas will have to travel much further to the public hospitals within the city. It is important to remember that the relative socio-economic accessibility of services will make them more or less available or desirable to some types of residents. For the poor residents in the city therefore, although they might be living in a medically relatively well provided area of the town, these private facilities are in effect not available to them. This seems to remind us that spatial propinquity may be different from social accessibility. This observation has also been highlighted by Joseph and Phillips (1984) and Phillips (1981) in their various studies.

Equally important and worth mentioning and analyzing is how easily and comfortable prospective patients get to the various health facilities available.

It is thus reasonable to suppose that utilization rates will be greatly influenced by modes of transport available. Table 4.10 below gives a summary of the various means of transport used in reaching the various health facilities within the metropolis.

Table 4.10 – Relationship between Utilization &amp; Mode of Transport Used.

Mode of Transport	Type Of Health Facility				
	Public Clinic	Public Polyclinic	Public Hospital	Private Clinic	Traditional Health Facility
Walking	46	25	15.4	11.7	35
Trotro	28	35	44.2	17.5	22.5
Taxi	18	16	21.2	34.9	25
Private Car	8	-	19.2	35.9	17.5
Total (N)	100 (50)	100 (40)	100 (104)	100 (103)	100 (40)

Figure 14 gives graphical representative of the data . It must be emphasized that whilst there is not so much direct evidence, indirect indices such as mode of transport used for varying various shealth facilities show that the nearby clinics and polyclinics in the metropolis were variably reached on foot or by trotro. As can be seen from the table, the percentage of respondents reaching the various government clinics, polyclinics and hospitals either on foot or by trotro are 74%, 60% and 59.6% respectively.

On the other hand, 70.8% of respondents using the private clinics reach it by either private cars or hiring taxis. Thus, one of the clearer examples of regular utilization decay with distance from home is seen in both public facility and other private health providers. This has also been documented by Habib and Vaughan (1986) in Iraq and Akin et al (1985) in Uganda. The decline is sharper for public health facilities than for private ones.

It is important to acknowledge the fact that the reasons for distance decay in the utilization of health services within one metropolis can be quite straightforward (prominent among the urban poor include lack of transport and/or high transport fares and traffic). However, the discussion so far has amply demonstrated that

there are equally important but rather complex combinations of reasons - social, economic, psychological, as well as physical distance - for the fall-off in demand and usage over distance. It is thus very important to move beyond mechanistic formulations of how distance as a variable operates and to focus on the ways in which people conceptualize illness and health, how they decide upon therapeutic strategies and then how chosen courses of action are implemented.

Any attempt to overlook this important aspect of how distance affects utilization of health care services will tend to suggest that utilization is actually regular and easily predictable. On the contrary, when the effects of distance is examined against, for example, type of illness, category of facility, age, sex, or social status, then very different sub-categories of influence of distance may evolve. The successful accomplishment of such a task can help planners and policy makers to decide where to locate facilities so that they have maximum impact, and to an extent minimize private and public travel costs and the like.

Discussions held with the proprietor of "Nipa Hia Moah" herbal centre located at Nyamekye Junction in Kwashieman revealed that about 65% of the visitors to the centre report of either pregnancy or impotency related problems, with some travelling over 10 kilometres for treatment. Conversely, almost the same percentage of visitors at the various public clinics visited report of mainly fever and are basically within the first two kilometres radius of the facility concerned.

The above reveals that the assessment of the illness is shown to be the policy determinant of health centre behaviour, affecting both the decision to seek treatment and the therapeutic option chosen. All things being equal, common, recognised and unthreatening conditions tend to evoke a different response from

chronic, unresponsive conditions or acute, apparently serious illness. The above has thus demonstrated the use and potential usage of certain facilities for specific conditions. This observation confirms the Stock's (1987) findings in Nigeria, which among others, noted that perceptions about sicknesses and specific illnesses are reflected directly in differential health facility utilization, and distance decay gradients vary accordingly. Among his observations, Stock noted fracture as a condition for which traditional treatment is perceived to be appropriate and by contrast, "tibi" (tuberculosis) is seen as an illness for which there is no indigenous remedy and Western style treatment is essential.

In brief, we find that several variables operate at individual level to affect utilization of health facilities. These variables are not the same for every health facility as well as residential areas. It was noted that economic variables play quite a significant role in determining who uses what with the affluent trading off distance and high fees for quality treatment.

Indeed this study is valuable as it emphasizes that the two most important explanatory variables for utilization were perceived sicknesses (need) and distance to the nearest health care facility, rather than any demographic variables. Levels of utilization were markedly reduced with increasing distance especially with the public facilities.

It must however be emphasized that many more variables could have been worked out but time and financial constraints would not permit that thus, making the present research restrict itself to the discussed variables. It is hoped that future research would be able to take into consideration some of the said variables like family ties and size which were conspicuously missing in the present

discussion. In the next chapter we will explore in more detail why patients choose a particular facility.

**CHAPTER FIVE**  
**RATIONALE FOR THE USE OF VARIOUS**  
**HEALTH FACILITIES**

**5.1 Introduction**

The previous chapter examined the relationship between independent variables and the utilization of health facilities. The aim was to identifying the variables that impinge on the utilization of health facilities. This chapter discusses in more detail reasons why patients choose a particular health facility in preference to others.

It must be emphasized that there are a lot of factors which together, account for one's choice of a particular health facility. However, an attempt is being made to determine the primary consideration by the individual in choosing a particular facility. To accomplish this aim, patients were asked to indicate which has been the main reason for using a particular health facility. A summary of the data is presented in Table 5.1. In so doing, we will draw on the background factors discussed in the previous chapters.

Table 5.1: Reasons given for the use of particular health facilities (%)

Reasons Assigned	Type of Health Facility				
	Govt. Clinic	Govt. Polyclinic	Govt. Hospital	Private Hospital	Traditional Health Centre
Has many Specialists	1.85	13.64	19.42	34.78	2.27
Courteous Staff	1.85	-	3.88	2.61	
Availability of Staff	5.56	9.1	12.62	10.86	20.46
Moderate Charges	38.89	37.36	19.42	6.52	27.27
Quick Services	-	11.36	6.8	26.1	-
Proximity	40.74	27.27	14.56	-	-
Free Medicare	7.41	-	15.54	11.46	-
Nature of Sickness	3.7	2.27	7.46	2.17	50
Total	100	100	100	100	100
(N)	(54)	(44)	(103)	(92)	(44)

Source: Field Survey, 1997

## 5.2 Rationale for the Use of Public Health Facilities.

### 5.2.1 Government Clinic

From the Table it is clear that out of 54 patients interviewed, 40.74% use government clinics because of distant factor. It is said to be close and almost within walking distance from their residence. Another important observation was the fact that economic factors do greatly influence the use of a particular facility. As many as 89% of respondents at the various clinics attributed their decision to use that facility to the fact that the charges are moderate compared to those charged by other health providers.

Another important observation here is the fact that nobody attributed his choice to the fact that services at the clinics are quickly executed, a fact which almost all public health providers are accused and guilty of. The fact that 2% of respondents attributed their choice to the presence of specialists is not surprising. In fact, in poor deprived residential peri-urban areas, the availability of a midwife or medical assistant seems to be regarded as signifying good quality care and had a significant effect on the number of public visits. This suggests that while the affluent in the society consider a public clinic to provide low quality of care, it is considered to be providing a high quality of care in the deprived areas of the city relative to the alternatives available.

### 5.2.2 Government Polyclinic

Observations at the government polyclinics collaborated well with that of the clinics. Distance and moderate charges of the various polyclinics were cited as the main reasons for usage, accounting for high frequencies of 27.27% and 36.3% respectively, with “having many specialists”, “quick service”, and “availability of

drugs” representing 13.64%, 11.36% and 9.1% in that order. Here again, nobody attributed his/her choice to the presence of courteous staff as observed at the public clinics.

### 5.2.3 Government Hospital

As noted earlier, the government’s referral health policy is deliberately designed such that the regional hospital should be capable of treating almost all serious illnesses. Hence, these hospitals are apparently staffed with ‘qualified’ personnel to meet the challenges they are supposed to face. Thus, as can be seen in table 5.1, 19.42% of respondents attributed their patronage to the fact that there are many specialists in these facilities notwithstanding the fact that their charges are quite moderate. This factor also accounted for 19.42%. An interesting observation here is the representation of those using the facility because of free medical facilities or because their organisations have adopted those hospitals in providing virtually free services. (i.e.15.541%). These include for example, policemen and their dependents who use the Police Hospital and Army Officers and men who have free treatment at the Military Hospital. To such group of people, they use a particular facility irrespective of the distance, quality of service or staff behaviour. Their sole motivation is the fact that they have access to free medical attention at these hospitals.

The above observations suggest that factors other than direct costs influenced behaviour and these appeared to include quality of treatment, confidence and accessibility. It also points to the need to incorporate non-government health care, the major sector of care, into the health care system to increase the official coverage of health services.

### 5.3 Rationale for the Use of Private Hospital/Clinic

As noted in earlier discussions, in urban areas like the Accra Metropolitan Area, the poor people may stretch themselves to pay for private care, but in such urban areas, public health facilities are supposed to substitute for other forms of medicare such as traditional care and thus provide a network of readily accessible care. In such instances, distance becomes less of an issue as attested to by Wong et al, (1987). In these circumstances, quality of care and public attitudes to it might assume greater importance. Table 5.1 depicts the above assertion. As much as 34.78% of respondents attributed their use of the private clinics to the fact that they have many specialities and therefore provide relatively better quality services even though charges at these facilities have been identified to be higher than those at public facilities. Interestingly, 26.1% of respondents indicated quick services at these centres as influencing the choice of such facilities. It is worth noting that in such a fast growing city like Accra, businessmen in particular would not want to spend several hours treating illnesses like headache and body pains at the government clinics where services are even generally considered sub-standard. They are more likely to accept the relatively high fees at the private clinics for quick treatment to enable them pursue the day's activities without hindrance.

#### 5.4 Rationale for the Use of Traditional Health Centre:

Table 5.1 also negates the idea that traditional medicine tends to be stronger or relied on more extensively in rural than in urban areas as being suggested by some researchers (Starrs 1987). The data show that it has nevertheless survived and, indeed, flourished in many urban and peri-urban settings as is the case in Accra.

As can be seen from the table, 50% of respondents attributed their choice to the fact that the nature of their sickness defies orthodox treatment or better still the disease is better treated through the traditional way. This is not surprising in society where majority of the populace still hold fast to their ancestral beliefs and practices. This observation compares favourably with one made by Good (1987) in Northern Nigeria where fractures for example were felt better dealt with by traditional bone-setters, as hospitals were widely believed to amputate fractured limbs. In the case of tuberculosis, by contrast, traditional remedies were not effective, hospital medicines were desired.

An equally important revelation is the apparent high representation of those who choose this facility because of either its relatively low charges (27.27%) or availability of drugs (20.46%). This is also not unexpected because the recent high rate of migration from the rural areas to the city of Accra has brought in its wake many unemployed youth who have thronged the city in search of non-existent white collar jobs. These disappointed youth take to selling dog chains and the ladies sell used clothing at the central business district (C.B.D.) whilst others take to “kayayoes”. These “new arrivals” can neither afford the high fees charged by the private sector nor can they do with the ‘sub standard’ services provided by the public sector at times without drugs. They are therefore

compelled to settle with the services offered by traditional practitioners whose charges are moderate and the supply of drugs is guaranteed. The introduction of user fees and the cash and carry system have even given more need for the traditional health practitioners.

It is therefore not surprising when as many as 66.4% of households indicated that given the opportunity they would prefer to attend Korle Bu hospital for treatment whilst 13.4 percent opted for private clinics. (see Table 5.2). These facilities are perceived to provide quality service even though their charges are high.

Table 5.2: Households Preferred Health Facility

Type of facility	Frequency	Percentage
Korle Bu	174	66.4
Police Hospital	16	6.1
Ridge	8	3.1
Achimota	1	.4
37 Military Hospital	20	7.6
Private Clinic	35	13.4
Traditional	3	1.1
Others	5	1.9
Total	265	100

Source: Field Survey, 1987.

Table 5.3 also gives a summary of household responses in respect of their preferred health facility. The results make interesting reading as many households attempt to downplay the importance of or the usage of the traditional

health facilities even though the discussion so far has amply demonstrated the importance of this sector in the general health care within the metropolis.

Table 5.3 Frequency of use of Traditional Health Centres

Frequency	Frequency	Percentage
Always	12	4.5
No	151	57
Occasionally	102	38.5
Total	265	100

Source: Field Survey 1997.

Out of a total of 265 households interviewed, 57% answered in the negative with only 4.5% positively attesting to their frequent use of such facility. The table also indicate that 38.5% of the respondents said they use it occasionally depending on the nature of the sicknesses being treated. Figure 15 is a graphical representation of the data.

It is worth stating here that perhaps this is one of the main difficulties of investigating the use of health centre; the frequent need to identify concurrent , or sequential use of multiple therapies. Many a time, once one-off questionnaires about behaviour may not reveal accurate patterns of utilization, it may be necessary to consider long periods of time. Above all, some respondents, it was noted, were reluctant to admit openly to the use of the traditional medicine for fear of being considered to appear ignorant or backward. In addition, at the individual level, as noted in earlier discussion, perceptions of the efficacy of western relative to traditional treatments for specific ailments have great influence

on utilization. It is thus certain from the above discussion that, in reality the settings for choice and usage are varied, concurrent and also dynamic.

This chapter has examined some of the reasons why a particular health facility is used in preference to others. It has generally been noted that the primary consideration of those using the public health facilities is the fact that their fees/charges are relatively moderate. Above all, they are easily within the reach of the prospective patients residence.

Users of private clinics on the other hand normally trade off distance and high fees for quality and quick services provided at these centres. At the traditional health centres, it was realized that utilization has to be looked into in the light of health care beliefs and also, the fact that services are more sociable, quick and inexpensive.

It must however be re-emphasized that these factors are by no means all the reasons why people use a particular facility. A lot of factors go into taking such a decision, which time and financial constraints will not permit the present study to fully investigate.

## CHAPTER SIX

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 6.1 Summary:

The aim of this study has been to assess the utilization of health facilities in the Accra Metropolis. The study was also designed to analyse the reasons why certain health facilities are preferred to others.

To seek empirical evidence for the utilization of health facilities and to help understand its nature, this study examined the evidence from some of the residential areas in Accra with special reference to the low residential areas as well as some outpatients in some of the health facilities within the metropolis.

The main source of data for the study was a structured and open-ended interview schedule designed to tap a variety of demographic, socio-economic and attitudinal information for household and patients at selected health facilities. The survey data were supplemented with census data, personal interview and observation as well as literature surveys. A total of 265 households and 250 patients were interviewed. The survey collected information on the socio-economic background of respondents, the household characteristics, health facility they normally use and why, as well as distance from one's residence to the chosen health facility. Information was also sought on cultural influences on the choice of a health facility. The analysis and interpretation of data was based on a number techniques using descriptive statistics and simple inter-relationships.

## 6.2 Conclusion

The following conclusions can be outlined from the study:

- a) The Accra Metropolitan Area has grown from its small nucleus to its present area extent of about 2300km square, which extends beyond its originally demarcated areal extent. It was also observed that the distribution of health facilities within the metropolis is skewed towards Osu Clotey and Ayawaso sub area. The Okaikoi and Kpeshie sub-areas with an area extent of 372 and 884 sq. km respectively are virtually neglected so far as the distribution of public health facilities within the metropolis is concerned. This, it was noted, resulted as a result of the historical development of the city which concentrated such facilities in the C.B.D. Above all, those apparent neglected areas, (i.e. Ablekuma, Okaikoi and Kpeshie) are areas currently absorbing new developers within the city.
- b) The results of the bivariate techniques supported the initial prepositions that one's socio-economic characteristics influence one's choice and use of a particular health facility. In fact the results of tests of hypotheses involving the use of the chi-square ( $X^2$ ) showed that there were significant relationships between the utilization of a particular health facility on one hand and education, occupation and income on the other hand. Whilst those with relatively high income patronize the private health facilities, low income earners were found to be clustering around the moderately priced government facilities where services are generally regarded to be sub standard compared to that provided by the private sector.
- c) The two most important explanatory variables for utilization were

perceived sickness (or need) and distance to the nearest health care facility, rather than any demographic variables. Levels of utilization were markedly reduced with increasing distance. However, with the private health providers, the distance decay factor was not as remarkable as that of the public sector thus suggesting that, people, the affluent in the society, are capable and prepared to trade off the distance factor for a satisfactorily quality and quicker services perceived to be provided by the private sector. This observation confirms an earlier one made by Heggenhongen (1980) in his study in Malaysia.

- d) Majority of users of government facilities attribute their choice to proximity to residence and the moderate rates/fees charged whilst those at the private sector attribute it to quality and quicker services provided.

#### 6.2.1 Implications of Findings for Policy

The above observations have several implications so far as the general development of the metropolis is concerned. For any meaningful regional planning these implications must be well noted for thorough consideration:

If the system of locating health services (both public and private) is not reviewed, certain sub metropolitan areas especially those around the C.B.D., will continue to attract more of these facilities to the detriment of others. This is because the high rate of population growth will necessitate the provision of more basic needs, including health facilities, for the fast growing population. Osu Clotey, for example, has an estimated population density of 1,270 persons per sq.km. It must also be noted that the private-for-profit sector will always like to invest in where it will reap the maximum profits.

- a) With the concentration of health facilities and the subsequent attraction of other economic facilities in C.B.D's, there is the likelihood that these areas could continue attracting migrants. The consequences of this on productivity and other social vices, not to mention its impact on the general economic development of the country cannot be over emphasized.
- b) There should be a conscious effort by the government to upgrade the services provided by the public sector, especially the community clinics, to build people's confidence in them. Failure to do this may reinforce the status-quo where the few perceived good one's are over patronized leading to congestion which has become the lot of few hospitals within the metropolis.

### **6.3 Recommendations**

In the light of the inherent effects of the present distribution of health facilities in the metropolis, the following recommendations are suggested. They are intended to serve as a guide or basis for an alternative policy rationale for future planning to meet the health needs of the people within the whole metropolis and thus help redress inter sub-metropolitan disparities in the provision of health facilities within the Accra Metropolitan Area.

1. As rightly noted by Philips (1990), health care delivery systems have often grown up in a fragmented manner, provided by public, private, charitable and aid sources and they have frequently been non-complementary or even competitive in their functions and locations. This is at the root of the redundancy and present day maldistribution of facilities, especially

government facilities which have not been spatially balanced. The decentralization of decision making being promoted under Ghana's Primary Health Care (P.H.C.) programme provides an excellent opportunity to address and solve this problem.

Under Ghana's P.H.C. programme as already discussed, the District Health Management Team (D.H.M.T.) is responsible for all health planning and programming within the district or the metropolis in this case. A team member trained in the use of simple optimization models, could work with the D.H.M.T. to identify an "optimal" and desirable set of facility locations for the metropolis. This could be the basis of health facility location plan for the metropolis, and the selected locations could be prioritized for development. The metropolis resources for additional health facilities could be allocated based on these priorities. In addition, any organisation seeking to develop a health facility within the 'region' could be encouraged to select one of the priority locations.

2. The threshold concept seems to hold true for whatever level of service is considered especially with those public health facilities. This means most medical services have a relatively limited range and it is important for planners to be able to identify this range in order that they can locate services so distance does not prove to be a significant deterrent. This might involve the provision of small-scale facilities than might otherwise be desirable or economic, or perhaps the use of mobile facilities to extend outreach to the newly developing areas such as Kwashiman, Odorkor, Taifa and many such new developing areas within A.M.A.

There is also the need for a conscious effort to improve inter-sectoral co-operation of all sectors whose functions have a bearing on health-care delivery in the metropolis and the whole country. These sectors include those providing safe - water, sound basic education, decent housing, poverty alleviation and social justice. This inter-sectoral linkages are important because the health of a people depends on several factors many of which are outside the control of the Ministry of Health. In other words there is a need for a comprehensive approach in addressing intricacies confronting the health delivery system in A.M.A.

There is also the need for more community and private sector involvement in the formulation of policies to solve health problems in the country in general. The stakeholders in the health sector particularly religious bodies, women's groups, community leaders and Trade Union Congress (T.U.C.) should all be consulted about major health policies.

The hospital staff, especially those of the public sector should also be urged to develop positive attitude towards work, respect patient's dignity, privacy and welfare to enhance the image and patronage of those facilities. The situation where the public see hospital staff especially Nurses as rude impolite and careless about patients welfare does not serves as a deterrant to their usage.

More importantly, conscious efforts should be made by the government to promote preventive health care. It is in this light that one sees the realization by President Rawlings when commissioning a \$36,550,000 Central Regional Hospital at Cape Coast on 12th August, 1998 as very encouraging. He acknowledged among other things that "the government has placed a lot of emphasis on primary health care and preventive health activities recently because

many of the conditions in the country's minor hospitals are preventable" (Daily Graphic, Thursday August 13, 1998. No. 147375 pg. 1).

It is worth adding that, serious efforts should be made to integrate the traditional health care resources into the orthodox one since they play, and will continue to play, a major role in the general health delivery system in the country. Traditional resources of care must not be regarded as antagonistic to cosmopolitan care but as an addition. However, there are certain cultural practices and beliefs especially those related to pregnancy that are deeply rooted in society so much so that those engaged in them need extra lenses through education to understand the real issues involved. But the cultural aspect which has to do with people's behaviours and belief is the most difficult to change and it is only through a comprehensive and systematic education which can help minimize if not completely eradicate this social canker. It is therefore hoped that the government will not relent in its efforts to educate and sensitize the citizenry on some of these negative cultural practices and beliefs.

This study has identified some of the factors that affect the utilization of health facilities within the Accra Metropolitan Assembly. Prominent among these factors as noted are proximity and income.

However, in interpreting the results of the study, considerable care is required before generalizing the findings to a range of geographical settings. Time and logistic constraints limited the number of variables used in this study. In-depth analysis of such variables like the physique of the individual, the socio-cultural environment and belief could help throw more light on why people are a particular facility at a particular time. This is particularly true in the newly

developing urban centres especially in the northern part of the country where traditionalism seems to be prevalent. A similar study based on socio-cultural environment and beliefs in these areas will help explain how these ecological and cultural differences affect the utilization of health facilities in the urban area in the country.

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**APPENDIX A**  
**QUESTIONNAIRE 1**

**SECTION A: PERSONAL INFORMATION**

1. **Sex:**
  - a) Male
  - b) Female
2. **Age.....**
3. **Religious Background**
  - a) Christian
  - b) Moslem
  - c) Traditional Religion
  - d) Others (Specify).....
4. **Educational Background**
  - a) Primary
  - b) Middle/Junior Secondary School
  - c) Secondary/Commercial/Technical
  - d) Post-Secondary/Training
  - e) Higher (e.g. University)
  - f) None
5. **Marital Status**
  - a) Married
  - b) Divorced
  - c) Widowed
  - d) Single/unmarried

- e) Others (Specify).....
6. **Number of children (Specify).....**
- a) Male .....
- a) Female.....
7. **Apart from your children, how many dependants do you have?**
- (Please Specify)**
- a) Family relative .....
- b) Maid/househelp.....
- c) Friend/Others.....
8. **How long have you lived in Accra?**
- a) Less than a year
- b) Between 1 - 4 years
- c) Between 5 - 10 years
- d) Over 10 years
9. **Ethnicity?**
- a) Ga
- b) Volta Extraction (Specify)
- c) Akan Extraction (Specify)
- d) Northern Extraction (Specify)
- e) Others (Specify).....
10. **Employment Status?**
- a) Employed
- b) Unemployed
- c) Retired

d) Others (Specify).....

**11. If employed, what is your occupation/profession?**

a) Civil Servant

b) Public Servant

c) House Wife

d) Farming

e) Business Executive

f) Others (Specify).....

**12. Position at Work place?**

a) Managerial position

b) Middle level management (e.g. typist, secretary)

c) Driver

d) Labourer

e) Others (Specify).....

**13. Approximated Income per month in cedis?**

a) Below 100,000

b) 100,000 - 200,000

c) 200,000 - 300,000

d) 300,000 - 400,000

e) above 400,000

**14. Do you have any other sources of income apart from monthly income?**

a) Yes

b) No

15. **If yes, please state the source and the amount.**
- a) Source.....
  - b) Approximated Amount (per month).....
16. **If retired, what was your occupation and position?**
- a) occupation.....
  - b) Position.....
  - c) Income Range per month (in cedis).....
17. **What are you presently doing for a living?**
- a) Pension
  - b) Remittances from children/family/friends
  - c) Personal Investments (Treasury/bills, rents etc.)
  - d) Trading
  - e) Farming
  - f) Others (Specify)

**SECTION B : ACCESS TO HEALTH****1. Which part of the city do you live**

	Sub-Metro	Residential Area	Residential Address
a	Osu Klotey		
b	Ayawaso		
c	Ablekuma		
d	Kpeshie		
e	Asiedu Keteke		
f	Okaikoi		

**2. Which is the most popular health facility within your locality?****(Please specify)**

Name of Facility	Residential Area/location	Nearest Street

**3. How many health facilities do you know of within your locality?**

- a) Public Health.....
- b) Private .....
- c) Mission.....
- d) Quasi Government.....
- e) Traditional/herbal.....
- f) Others (Specify).....

**4. Which is the most popular health facility within your locality?**

- a) Name of facility

- b) Location
- c) Nearest Street

**5 Give reasons for your choice**

- a) It has many specialists
- b) It has a courteous staff
- c) Availability of drugs
- d) Its charges/fees are moderate
- e) Quick services
- f) long existence
- g) Others (Specify).....

**6. Which health facility do you normally attend/use?**

- a) Public Health facility
- b) Private Health facility
- c) Mission health facility
- d) Traditional Health Centre
- e) Self medication
- f) Others (Specify).....

7. **Where is the facility located?**

Sub-Metro	Residential Area
Ayawaso	
Okaikoi	
Kpeshie	
Asiedu Keteke	
Ablekuma	
Osu Klotey	

8. **How far is the facility from your house?**

- a) less than a kilometre
- b) between 1 - 3 km
- c) Between 4 - 5 km
- d) Between 5 - 8 km
- e) Between 8 - 10 km
- f) Above 10 km

9. **Mode of transport to the health centre**

- a) Private Car
- b) Walking
- c) Taxi/Hiring
- d) Trotro
- f) Others (Specify).....

10. **Approximate transport cost to and from your health centre (in cedis)**  
**(per trip)**
- a) below 1000
  - b) 1000 - 2000
  - c) 2000 - 3000
  - d) 3000 - 4000
  - e) above 5000
11. **Do transportation difficulty/problems influence your choice of a facility?**
- a) Yes
  - b) No
12. **If yes, explain.....**  
.....  
.....  
.....
13. **Which of the following factors do influence your choice of a health facility?**  
**(Please rank in order of importance)**
- a) Economic reasons (e.g. cost of treatment and drugs)
  - b) Distance
  - c) Quality of services (e.g. availability of specialist, drugs, X-ray etc.)
  - d) Acquaintance (e.g. family/tribal ties, occupational facility, etc)
  - e) Type of the sickness
  - f) Others (Specify).....

14. **Does the distribution of government hospitals/clinics within the city make it easy for you to get medical services?**
- a) Yes
  - b) No
  - c) indifferent
15. **Explain .....**
- a) Easily accessible (in terms of distance)
  - b) Allows multiplicity of choice
  - c) Foster competition
  - d) Allows for coordination
  - e) Others (Specify).....
16. **Which part of the city would you suggest that a government hospital/health centre be built? (Specify)**
- a) Sub Metro .....
  - b) Residential Area.....
17. **Why? .....**
- a) Lack of a health facility within the locality
  - b) Prevalence of diseases
  - c) Density of population
  - d) Transportation problems
  - e) Others (Specify).....
18. **Do you normally report at a hospital/health centre as soon as you fall sick?**
- a) Yes
  - b) No

19. **If No, why?**

- a) Lack of health facility within the locality
- b) Financial constraints
- c) Religious believes
- d) Distance
- e) Self medication
- f) Others (Specify).....

20. **What type of sicknesses (in order of importance) do you normally report at the hospital/health centre?**

- a) Diarrhoea
- b) Malaria
- c) Fever
- d) Accidents
- e) Skin diseases
- f) Pregnancy related
- g) Hypertension
- h) diabetes
- i) Others (Specify).....

21. **Which sickness do you normally treat through other sources such as herbal, spiritual etc.**

- a) .....
- b) .....
- c) .....

22. **What other sort of medication do you normally use ?**
- a) Traditional health practitioners
  - b) Self medication
  - c) Prayer Groups/Spiritual
  - d) Others (Specify).....
23. **Give reasons for your choice**
- a) Lack of funds
  - b) Lack of modern health unit within locality
  - c) Nature of sickness
  - d) Prompt and reliable services
  - e) Others (Specify).....
24. **Do you attend traditional health centres?**
- a) Yes, Always
  - b) No
  - c) Occasionally
25. **Which of the following account for your answer in Question 24.**
- a) Nature of sickness (Specify)
  - b) Availability of drugs
  - c) Relatively cheaper cost (e.g. drug, time)
  - d) Quality and prompt services
  - e) Courtesy of staff
  - f) Favourable mode of payments (e.g. deferred payment, payment in kind etc.)

g) Others (Specify) .....

26. **How far is that traditional centre from your house?**

- a) less than 1 km
- b) Between 2 - 3 km
- c) Between 4 - 8 km
- d) Above 8km

27. **Which health facility within the city will you most preferably want to attend/use.**

- a) Korle Bu
- b) Police Hospital
- c) Ridge
- d) Achimota
- e) 37 Military Hospital
- f) Private Clinic (Specify)
- g) Traditional health centre (Specify)
- h) Others (Specify) .....

28. **Why ?**

- a) Convenience/Acquaintance
- b) Closer to residence
- c) Quality of service/Availability of drugs
- d) Transportation/time factor
- e) Family/tribal ties
- f) Others (Specify)

29. **Have you ever changed from one health unit to another ?**
- a) Yes
  - b) No
30. **If yes, what were the reasons for such a change.**
- a) Change of residency
  - b) High cost of treatment
  - c) After retirement
  - d) Nature of sickness
  - e) A better substitute found
  - f) Others (Specify).....
31. **Has any societal norms/rules influence your choice of a health unit?**
- a) Yes
  - b) No
32. **If yes, which one ?**
- a) Religious believes
  - b) Tribal believes
  - c) Friends/relations comments
  - d) Occupational opportunities
  - e) Others
33. **Which health facility do you/your wife attend clinic during pregnancy?**
- a) Public health facility
  - b) Private health facility
  - c) Traditional Health Centre

d) Others (e.g. Prayer Camp; Self medication;)(Specify) .....

.....

34. **How often?**

a) Regularly

b) When financially sound

c) As determined by the doctor

d) As at when fall sick

e) Others (Specify) .....

35. **How many children were delivered in the hospital? .....**

a) All

b) Some (Specify)

c) None

36. **Which other places did you deliver?**

a) T.B.A.

b) Home

c) Prayer Camp

d) Others (Specify)

**APPENDIX B**  
**QUESTIONNAIRE 2**

**SECTION A: LOCATIONAL DECISION**

1. **Name of Health Facility**

.....

2. **Type of Health facility**

a) Government

b) Private

c) Traditional/Herbal

d) Quasi Government

e) Mission

f) Others (Specify).....

3. **Where is your health facility located? (Please specify)**

Sub Metro	Residential Area	Residential Address .
Kpeshie		
Okaikoi		
Osu Klottey		
Asiedu Keteke		
Ayawaso		
Ablekuma		

4. **Which of the following influenced your decision to locate here?**

**(Rank in order of importance)**

- a) Accessibility of the site from other parts of the city
- b) Population size of the location
- c) Absence of any health facility within the location
- d) Remoteness of the area
- e) Presence of a popular medical establishment (e.g. a Hospital in the vicinity)
- f) Others (Specify).....

**5. Are there any locational or Zoning laws which influenced your location decision?**

- a) Yes
- b) No

**6. If yes, what are these laws? .....**

.....  
.....

**7. Is your building a rented one or personally owned?**

- a) Rented
- b) Personally owned
- c) Government
- d) Mission
- e) Others (Specify)

**8. If rented, was your locational decision also influenced by the availability of this building?**

- a) Yes
- b) No

9. **Have you ever moved your facility from a different site?**

- a) Yes
- b) No

10. **If yes, name the place you moved from (Specify)**

Sub Metro	Residential Area	Residential Address
Kpeshie		
Okaikoi		
Osu Klottey		
Asiedu Keteke		
Ayawaso		
Ablekuma		

11. **What were your reasons for moving?**

- a) Acquired a personal premise
- b) Government directives
- c) On the instruction of the landlord
- d) Poor patronage at
- e) Availability of other supporting services at the new site
- f) Poor environmental and social facilities
- g) Others (Specify).....

12. **Given the opportunity, would you like to relocate your facility at some other site outside where you are presently located?**

- a) Yes

b) No

13. **If yes, indicate the particular area/location (Please rank them)**

a) .....

b) .....

c) .....

14. **What are your reasons for your choice?**

.....

.....

.....

15. **Are there any laws by the Ministry of Health (M.O.H.) or the Accra**

**Metropolitan**

a) Yes

b) No

16. **If yes, please state it/them.....**

.....

.....

17. **Do you encounter any environmental problems in the dispensation of your duty in this facility?**

a) Yes

b) No

**18. If yes, please state it/them**

.....  
.....  
.....

**19. What are the main limitations that affect your health facility?**

a) .....  
.....  
b) .....  
.....

**SECTION B: INFRASTRUCTURAL FACILITIES**

1. Which of the following facilities do you have at your health unit.

1.	Wards	Male	
		Female	
		Children	
		Maternity	
		Labour	
2.	Laboratory		
3.	Operation Theatre		
4	X-ray department		
5	Pharmacy/Dispensary		
6	Accident/Emergency Centre		
7	Intensive Care Unit		
8	Dental Department		
9	Eye Department		
10	Mortuary		
11	Ambulance		
12	Laundry		
13	Kitchen		
14	Accounts Department		
15	General Stores		

**SECTION C: HUMAN RESOURCE/PERSONNEL**

1. **How many doctors do you have at your health unit?**

a) Permanent.....

b) Part-time.....

2. **Please indicate the number of specialist doctors at this health unit.**

Specialist	No.	Permanent	Part time
1. General Surgeon			
2. Physician Specialist			
3. Pediatrician			
4. Obstetrician Gynaecologist			
5. Optamologist			
6. Dentist			
7. Dermatologist			
8. Anaesteologist			
9. Physiotherapist			
10. Medical Assistant			
11. Others (Specify)			

**3. Please indicate the number of the following staff at your health unit.**

	STAFF	NUMBER
1.	Deputy Director of Nursing Services (D.D.N.S.)	
2.	Principal Nursing Officer (P.N.O.)	
3.	Senior Nursing Officer (S.N.O.)	
4.	Nursing Officer (N.O.)	
5.	Senior Staff Nurse/Midwife (S.S.N/M)	
6.	Staff Nurse (S.R.N)	
7.	Senior Enrolled/Senior Community Health Nurse	
8.	Enrolled/Community Health Nurse	
9.	Ward Assistant	
10.	Hospital Orderly	
11.	Principal Pharmacist	
12.	Senior Pharmacist	
13.	Pharmacist	
14.	Houseman Pharmacist	
15.	Dispensary Technician	
16.	Dispensary Assistant	
17.	Dispensary Attendant	
18.	Principal Hospital Secretary	
19.	Senior Hospital Secretary	
20.	Hospital Secretary	
21.	Executive Officer	
22.	Typist/Stenographer	
23.	Storekeeper	
24.	Biostatistics Assistant	
25.	Medical Records Assistant	
26.	Occupational Therapist	
27.	Technical Officer	
28.	Catering Officer	
29.	Laundryman	
30.	Security/Messenger/Labourer	
31.	Driver	

4. **Do you have an Operational Theatre?**
- a) Yes
  - b) No
5. **If no, how do you handle serious cases reputed at your facility?**
- a) Refer patient to other hospitals
  - b) Use facilities at a nearby hospital/clinic
  - c) Others (Specify).....
6. **Apart from Korle Bu Teaching Hospital, which other hospital do you refer serious cases to?**
- a) Ridge Hospital
  - b) Police Hospital
  - c) Legon Hospital
  - d) Achimota Hospital
  - e) Children Hospital
  - f) Others (Specify).....
7. **Explain the reason for your choice in Question 6.....**
- .....
- .....
- .....

**SECTION D: ATTENDANCE**

1. **What type of diseases do patients normally report at your health facility**

**(Please Rank them)**

- a) Malaria
- b) Diarrhoea
- c) Fever
- d) Hypertension
- e) Diabetes
- f) Pregnancy related
- g) Skin diseases
- h) Accidents
- i) Others (Specify)

2. **What is the average daily attendance rate.**

- a) below 20
- b) 20 - 50
- c) 51 - 100
- d) above 100

3. **What kind of people normally patronise your hospital/clinic?**

- a) High Income group
- b) Middle Income group
- c) Low Income group

4. Which category of people normally attend your facility (Rank them). '

- a) Men
- b) Women
- c) Youth
- d) Children

5. From which part of Accra do most of your patients come? (Specify)

Sub Metro	Residential Area
Kpeshie	
Osu Klottey	
Asiedu Keteke	
Ayawaso	
Ablekuma	
Okaikoi	

6. Do patients come from outside Accra to attend your health unit?

- a) Yes
- b) No

7. If yes, please name the place (town & region)

- | Town     | Region |
|----------|--------|
| a) ..... | .....  |
| b) ..... | .....  |
| c) ..... | .....  |

8. In your own estimation, which of the following do influence the patronage of your facility? (Rank them)

- a) Easily accessible (in terms of distance and transportation)
- b) Affordability (e.g. cost)
- c) Quality and prompt services
- d) Courteous Staff
- e) Availability of drugs
- f) Others (Specify).....

9. **What are the main complaints you normally receive from your patients?**

.....

.....

.....

.....

.....

.....

10. **What are some of the laws of M.O.H. or A.M.A., relating to health policy you want to be changed to facilitate smooth health delivery in the metropolis?**

.....

.....

.....

.....

**SECTION E: PERSONAL INFORMATION**

1. **Name of Respondent (Optional).....**
2. **Sex**
  - a) Male
  - b) Female
3. **Educational Background**
  - a) Primary
  - b) Middle/JSS
  - c) SSS/Commercial/Technical
  - d) Post Secondary/Training
  - e) Higher (e.g. University)
  - f) Others (Specify) .....
4. **Position/Rank of Respondent .....**
5. **How long have you worked in this facility? .....**

## APPENDIX C

## Chi-Square Test of Relationship between Utilization of Health Facilities and Income.

Q. Which health facility do you normally use

						Row Total
	1	2	3	4	5	
Government. Clinic	7 (33.3)	22 (21.6)	3 (5.2)		2 (16.7)	34 (15.2)
Govt. Polyclinic		14 (13.7)	20 (34.5)	21 (70.0)	9 (75.0)	64 (28.7)
Government Hospital	2 (9.5)	42 (41.2)	18 (31.0)	3 (10.0)		65 (29.1)
Private Hospital	3 (14.3)	14 (13.7)	9 (15.5)			26 (11.7)
Traditional Health Centre	9 (42.9)	10 (9.8)	8 (13.8)	6 (20.0)	1 (8.3)	34 (15.2)
Column Total	21 (9.4)	102 (45.7)	58 (26.0)	30 (13.5)	12 (5.4)	233 (100.0)

<u>Chi-square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	91.79362	16	.00000
Likelihood Ratio	103.04668	16	.00000
Mantel - Haenszel test for linear Association	3.62144	1	.05705

Minimum Expected Frequency - 1.399

Cells with Expected Frequency <5-11 of 25 (44.0%)

Number of missing observation - 115

Degree of Freedom - 95%

Calculated value of Chi-square ( $X^2$ ) = 91.79

Critical Value of Chi-square ( $X^2$  0.05) = 7.96

**Decision:** Reject Null hypothesis and accept alternative hypothesis

## APPENDIX D

## Chi-Square Test of Relationship between Utilization of Health Facilities and

## One's Educational Background.

## Q. 27B . Which health facility within the city you normally attend.

Count Col Pct Korle Bu	Police	Police	Ridge	Achimota	37 Military Hospital	Private	Trad. Health Centre	Others	Row Total
	1	2	3	4	5	6	7	8	
Primary	14 (8.1)				2 (10.0)		1 (33.3)	2 (40.0)	19 (7.3)
Middle/JSS	55 (31.8)	1 (6.3)	3 (37.5)		7 (35.0)	4 (11.8)	1 (33.3)	2 (40.0)	73 (28.1)
Secondary/Comm/Techn.	62 (35.8)	7 (43.8)	3 (37.5)	1 (100.0)	8 (40.0)	7 (20.6)			88 (33.8)
Post Sec/Training	23 (13.3)	7 (43.8)	1 (12.5)		1 (5.0)	5 (14.7)		1 (20.0)	38 (14.6)
Higher (Eg. University)	14 (8.1)	1 (6.3)	1 (12.5)		1 (5.0)	18 (52.9)			35 (13.5)
None	5 (2.9)				1 (5.0)		1 (33.3)		7 (2.7)
Column Total	173 (66.5)	16 (6.5)	8 (3.1)	1 (.4)	20 (7.7)	34 (13.1)	3 (1.2)	5 (1.9)	260 (100.0)

<u>Chi-square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	99.43119	35	.00000
Likelihood Ratio	81.0000	35	.00002
Mantel-Haenszel test for linear association	7.67116	1	.00561

Minimum Expected Frequency - 0.027

Cells with Expected Frequency < 5 - 380F 48 (79.2%)

Number of Missing Observations: 5

Degree of Freedom : 95%

Calculated value of chi-square 99.43

Critical value of chi-square ( $X^2$  0.05) 26.5

Decision: Reject Null hypothesis and accept the alternative hypothesis

## Appendix E

## Chi-Square Test of Relationship between Utilization of Health Facility and Occupation.

Q.27. Which health facility do you normally use.

Count Col. Pct.	Managrl. Position	Middle Level	Driver	Labourer	Self Employd.	Student	Apprentice	.Row Total
	1	2	3	4	5	6	7	
Govt. Clinic	3 (7.0)	11 (13.3)	4 (50.0)	5 (5.0)	17 (16.0)	6 (11.3)		46 (15.0)
Govt. Polyclinic	1 (2.3)	5 (6.0)			25 (23.6)	6 (11.3)	1 (25.0)	38 (12.4)
Govt. Hospital	8 (18.6)	27 (32.5)	1 (12.5)	4 (4.0)	28 (26.4)	18 (34.0)	3 (75.0)	89 (29.0)
Private Hospital	24 (55.8)	32 (38.6)	3 (37.5)		19 (17.9)	21 (39.6)		99 (32.2)
Traditional Health Centre	7 (16.3)	8 (9.6)		1 (10.0)	17 (16.0)	2 (3.8)		35 (11.4)
Column Total.	43 (14.0)	83 (27.0)	8 (2.6)	10 (3.3)	106 (34.5)	53 (17.3)	4 (1.3)	307 (100.0)

<u>Chi-Square</u>	<u>Value</u>	<u>DF</u>	<u>Significance</u>
Pearson	72.25659	24	.00000
likelihood	75.80819	24	.00000
Mantel-Haenszel			
test for linear Association	2.66432	1	.10262
Minimum Expenditure			
Frequency	.456		

Cells with Expected Frequency <5 - 160F 35 (45.7%)

Degree of Freedom 95%

Calculated value of Chi-square: 72.26

Critical value of chi-square ( $X^2_{0.05}$ ) = 12.8

Decision: Reject Null hypothesis and accept the alternative hypothesis

## APPENDIX F

Definition of socio-environmental zones in Accra 1992		
Zones	Description	Residential areas covered
<b>HDIS</b>	<b>High density Indigenous sector</b>	
Zone 1	These areas are the oldest sections of Accra. They house "indigenous communities - mainly the original Ga townships with family compound houses and similar history and culture. Population very dense; growth rates now low. Characteristically low incomes mainly from fishing. Very Poor levels of infrastructure.	Osu, Korle Dudor, Nungua, Old Teshie, L, James Town, Chorkor, Adedenkpo, Old Dansoman, Korle Gonno.
<b>HDLCS</b>	<b>High Density low-class sector</b>	
Zone 2	Areas are characterised by very high densities, low income Population: high percentage of population are migrants. Ethnically diverse. Extremely poor infrastructure conditions. High growth rates. Most areas are low lying; easily flooded. Housing is sometimes temporary wooden shacking	Nima, Accra New Town, Sukura/Russia, Tudu, Sabon Zongo, Mamobi, Madina, Accra Central.
<b>MDIS</b>	<b>Medium density indigenous sector</b>	
Zone 3	Shelters people who otherwise have been living in the HDIS But have moved out because their lot has improved. Incomes Are marginally higher than HDIS and HDLCS. Densities Not as high as in HDIS. Many migrants also live here/ Infrastructure poor to adequate	Abossey Okai/Mataheko Darkuman, Abeka, Mamprobi, Kokomlemle, Kphehe, New Mamprobi, Bubushie, Adabraka, North Odorkor
<b>MDMCS</b>	<b>Medium density middle class sector</b>	
Zone 4	Started as LDHCS but has been overcome by rapid urbanization. Residential quality and services are good. Housing people with Primary education or better: incomes are medium but slightly Lower and densities are higher than LDHCS or LDMCS.	Asylum Down, Avenor, Alajo, Teshie-Nungua Est. Kotababi, Ablenkpe, Dzorwulu, Lartebiokorshie, South Labadi Teshie Camp, Burma Camp
<b>LDMCS</b>	<b>Low density middle-class sector</b>	
Zone 5	Started as state-owned estates for government staff. With time The quality of the estates has deteriorated. Densities are Relatively low as are growth rates. Population is middle Income: infrastructure conditions are adequate	Teshie, Dansoman Est., Tesano, South Odorkor, Kaneshie, Ministries, New Dansoman, North Industrial, North Kaneshie. South Industrial
<b>LDHCS</b>	<b>Low density high-class sector</b>	
Zone 6	This area is populated in high socio-economic status people with High levels of education and wealth. It has low density, low Growth and has adequate infrastructure and services.	East/West Ridge, North Labone, Ringway Estate, Cantoments, Airport.
<b>LDNDS</b>	<b>Low density newly developing sector</b>	
Zone 7	Newly developing settlements usually on the city fringe. Some Evidence and lack of basic infrastructure but housing facilities are Usually adequate. These areas are populated by newly middle Income groups seeking to develop property. Growth rates Are rapid	East Legon/Shiasi, Legon Village, Achimota.

## APPENDIX G

## Accra: Ranked Population Densities by Residential Areas for 1960

		Residential Area	Area Hectare	of Accra Area	Density per Hectare	of Accra Population
High	1	Dansoman (old)	39.4	0.36	356.36	3.62
"	2	Accra New Town	145.5	0.32	223.76	8.27
"	3.	Nima	158.0	1.45	188.59	7.67
"	4.	Sabon Zongo	37.0	0.34	141.97	1.35
"	5.	Chorkor	70.2	0.65	139.29	2.52
"	6.	Adabraka	173.5	1.60	129.39	5.78
"	7	Accra New Town	110.6	1.02	125.50	3.57
"	8	Adedenkpo	119.7	1.10	110.14	3.39
"	9	Asylum Down	79.8	0.73	99.25	2.04
"	10	South Labadi	76.8	0.71	79.84	1.58
"	11	Korle Dudor	155.4	1.43	79.69	3.19
"	12	Accra Central	74.3	0.68	78.73	1.51
"	13	Osu Christianborg	375.8	3.46	56.04	5.42
"	14	Mamprobi	127.7	1.18	53.70	1.77
"	15	Kokomlemle	145.1	1.34	51.34	1.92
"	16	Tudu	45.1	0.42	49.64	0.58
"	17	Kpehe	110.8	1.02	46.57	1.33
"	18	Ringway Estate	52.1	0.48	46.16	0.62
"	19	Teshie	261.7	2.41	41.61	2.80
"	20	Labadi	588.8	5.43	41.31	6.26
"	21	Korle Gonno	515.7	4.75	37.59	4.99
"	22	Kaneshie	263.4	2.43	37.20	2.52
"	23	Kotobabi	141.1	1.30	36.94	1.34
"	24	Maamobi	133.4	1.23	36.34	1.25
Medium	25	Old Teshie	234.1	2.16	34.89	2.10
"	26	Abossey Okai	368.0	3.39	32.72	3.10
"	27	Ministries	144.3	1.33	28.98	1.08
"	28	Avenor	81.4	0.75	28.38	0.59
"	29	Laterbikorshie	245.3	2.26	28.02	1.77
"	30	Achimota	327.2	3.01	25.62	2.16
"	31	Odorkor	276.9	2.55	17.14	1.22
"	32	Airport	374.5	3.45	14.51	1.40
"	33	Ridge/West Ridge	305.3	2.81	14.17	1.11
"	34	Bubuashie	237.5	2.19	13.30	0.81
"	35	East Legon/Shiashi	270.0	2.49	13.02	0.09
"	36	Burma Camp	586.6	5.40	10.60	1.60
"	37	Cantonments	580.9	5.35	10.04	1.50
Low	38	Nungua	1152.3	10.62	9.62	2.86
"	39	Alajo	169.4	1.56	8.45	0.37
"	40	Tesano	370.6	3.41	8.37	0.80
"	41	Legon/Staff Village	260.0	2.39	7.15	0.48
"	42	Teshie Camp	411.7	3.79	5.10	0.54
"	43	South Industrial	298.6	2.75	3.51	0.27
"	44	North Industrial	166.0	1.53	1.03	0.04
		GRAND TOTAL	10859.5	100.00	35.77	100.0

Source: 1960 Population Census Report

## APPENDIX H

## Accra: Ranked Population Densities by Residential Areas for 1970

	Residential Area	Area Hectare	of Accra Area	Density per Hectare	of Accra Population	
Very high	1	Dansoman (old)	39.4	0.31	366.12	2.27
High	2	Accra New Town	110.6	0.88	331.19	5.74
"	3	Nima	158.0	1.26	330.82	8.20
"	4	Sabon Zongo	37.0	1.26	228.81	1.33
"	5	James Town	143.5	0.29	213.21	4.80
"	6	Chorkor	70.2	1.14	186.18	2.05
"	7	Southern Labadi	76.8	0.56	182.15	2.20
"	8	Adedenkpo	119.7	0.61	166.86	3.14
"	9	Adabraka	173.5	0.95	161.83	4.41
"	10	Maamobi	133.4	1.38	111.87	2.34
"	11	Kokomlemle	145.1	1.06	111.67	2.55
"	12	Asylum Down	79.8	1.16	105.50	1.32
"	13	Old Teshie	234.1	0.64	88.15	3.24
"	14	Korle Dudor	155.4	1.87	84.14	2.05
"	15	Osu Christianborg	375.8	1.24	83.90	4.95
"	16	Tudu	45.1	3.00	77.41	0.55
"	17	Kaneshie	263.4	0.36	73.79	3.03
"	18	Kotobabi	141.1	2.10	71.98	1.60
"	19	Mamprobi	127.7	1.12	70.45	1.41
"	20	Abossey Okai	368.0	1.02	70.10	4.05
"	21	Labadi	588.8	2.93	67.54	6.24
"	22	Sukura	54.9	4.70	59.51	0.51
"	23	Laterbiokorshie	245.3	0.44	53.23	2.05
"	24	Accra Central	74.3	1.96	52.52	0.61
High	25	Korle Gonno	515.7	0.59	47.52	3.85
"	26	North Kaneshie	169.9	4.11	47.29	1.26
"	27	Ministries	144.3	1.35	41.50	0.94
"	28	Darkuman	263.1	1.15	40.82	1.69
"	29	Teshie	261.7	2.10	38.86	1.60
"	30	Airport	374.5	2.09	37.18	2.19
Medium	31	Bubuashie	237.5	2.98	34.85	1.30
"	32	North Labone	165.8	1.89	33.59	0.87
"	33	Kpehe	110.8	1.32	32.32	0.56
"	34	Ringway Estate	52.1	0.88	29.10	0.24
"	35	New Mamprobi	189.1	0.42	28.90	0.86
"	36	Tesano	370.6	1.51	24.37	1.42
"	37	Alajo	169.4	2.95	22.66	0.60
"	38	Ridge/West Ridge	305.3	1.35	21.41	1.03
"	39	Burma Camp	586.6	2.43	20.88	1.92
"	40	Avenor	81.4	4.69	20.80	0.27
"	41	Achimota	327.2	0.65	20.74	1.07
"	42	Odorkor	276.9	2.61	20.22	0.88
"	43	South Industrial	298.6	2.21	17.45	0.82
"	44	Cantonments	580.9	2.38	16.13	1.47
"	45	Teshie Camp	411.7	4.64	15.50	1.00
"	46	Legon/Staff Village	260.0	3.28	14.44	0.59
"	47	Abeka	310.3	2.07	12.01	0.59
Low	48	Nungua	1152.3	2.47	8.71	1.58

## Appendix H..... Contd.

		Residential Area	Area Hectare	of Accra Area	Density per Hectare	of Accra Population
Low	49	South Odorkor	358.4	2.86	7.26	0.41
	50	Teshie Nungua Estate	172.5	1.37	5.87	0.16
"	51	East Legon/Shiashi	270.0	2.15	2.84	0.12
"	52	North Industrial	166.0	1.32	2.02	0.05
"		GRAND TOTAL	12543.5	100.0	50.76	100.00

Source: 1970 Ghana Population Census Report

## APPENDIX I

## Accra: Ranked Population Densities by Residential Areas for 1984

		Residential Area	Area Hectare	of Accra Area	Density per Hectare	of Accra Population
Very High	1	Accra New Town	110.6	0.79	370.12	4.22
High	2	Nima	158.0	1.13	334.85	5.46
"	3.	Sabon Zongo	37.0	0.26	330.19	1.26
"	4.	Chorkor	70.2	0.50	274.46	1.99
"	5.	James Town	143.5	1.03	251.97	3.73
"	6.	Sukura	54.9	0.39	202.48	1.15
"	7	Maamobi	133.4	0.95	193.52	2.66
"	8	Old Dansoman	39.4	0.28	183.73	0.75
"	9	South Labadi	76.8	0.55	183.13	1.45
"	10	Adedenkpo	119.7	0.86	162.51	2.00
"	11	Adabraka	173.5	1.24	162.02	2.90
"	12	Kotobabi	141.1	1.01	142.52	2.07
"	13	Kokomlemle	145.1	1.04	134.86	2.02
"	14	Tudu	45.1	0.32	132.93	0.62
"	15	Asylum Down	79.8	0.57	118.81	0.98
"	16	Abossey Okai	368.0	2.63	117.71	4.47
"	17	Mamprobi	127.7	0.91	117.20	1.54
"	18	Kpehe	110.8	0.79	113.16	1.29
"	19	Old Teshie	234.1	1.67	111.00	2.68
"	20	Bubuashie	237.5	1.70	106.97	2.62
"	21	Korle Dudor	155.4	1.11	104.78	1.68
"	22	Osu Christianborg	375.8	2.69	103.84	4.03
"	23	Teshie	261.7	1.87	100.71	2.72
"	24	North Kaneshie	169.9	1.21	100.25	1.76
"	25	Labadi	588.8	4.44	94.51	5.76
"	26	Laterbiakorshie	245.3	1.75	87.91	2.22
"	27	Alajo	169.4	1.21	86.54	1.51
"	28	New Mamprobi	189.1	1.35	80.54	1.57
"	29	Abeka	310.3	2.22	80.25	2.57
"	30	Darkuman	263.1	1.88	74.25	2.02
"	31	Accra Central	74.3	0.53	68.96	0.53
"	32	Kaneshie	263.4	1.88	68.27	1.86
"	33	Teshie Nungua Estate	172.5	1.23	49.10	0.87
"	34	Tesano	370.6	2.65	46.32	1.77
"	35	Achimota	327.2	2.34	45.41	1.53
"	36	North Labone	166.8	1.18	44.50	0.76
"	37	Ministries	144.4	1.03	44.30	0.66
"	38	Korle Gonno	515.7	3.68	43.75	2.33
"	39	Odorkor	276.9	1.98	42.22	1.21
"	40	Dansoman Estate	1060.6	7.59	40.72	4.46
"	41	Airport	374.5	2.68	39.41	1.52
"	42	Avenor	81.4	0.58	38.39	0.32
Medium	43	South Odorkor	358.4	2.56	35.16	1.30
"	44	Ringway Estate	52.1	0.37	33.74	0.18
"	45	Ablemkpe	204.1	1.46	33.23	0.70

## Appendix I.....Contd.

		Residential Area	Area Hectare	of Accra Area	Density per Hectare	of Accra Population
Medium	46	Burma Camp	586.6	4.20	26.74	1.62
"	47	Teshie Camp	586.6	2.94	21.40	0.91
"	48.	North Industrial	411.7	1.17	20.85	0.36
"	49	Nungua	166.0	8.23	20.69	2.46
"	50.	Ridge/West Ridge	1152.3	2.18	19.74	0.62
"	51	Cantonments	305.3	4.16	17.47	1.05
"	52	South Industrial	580.9	2.13	17.33	0.53
"	53	Dzorwulu	298.6	1.33	15.67	0.30
Low	54	Legon/Staff Village	186.5	1.86	7.75	0.24
"	55	East Legon/Shiashi	270.0	1.93	2.90	0.24
		GRAND TOTAL	13994.7	100.0	69.25	100.00

Source: 1984 Ghana Population Census Report