UNIVERSITY OF GHANA

“I AM NOW A DOCTOR”: SELF-MEDICATION PRACTICES AMONG HOUSEHOLDS IN ACCRA

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THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA, LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MPHIL SOCIOLOGY DEGREE.

JULY, 2016
DECLARATION

I hereby declare that, apart from references cited in this work, which have been duly acknowledged, this thesis is the result of my own research work, carried out under the auspices of the Department of Sociology, University of Ghana, Legon, and under the supervision of Prof. Kodjo Senah and Dr. Peace Mamle Tetteh. I further declare that as far as I am aware, this work has not been presented in part or in full anywhere for a degree or certificate in any higher institution. Finally, I declare that all errors of misinterpretation and misrepresentation of data are solely mine.

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DEDICATION

This long essay is dedicated to my mother, Bernice Agblevor and my late dad Mr. Solomon Agblevor as well as my two lovely brothers for their unflinching support and love. Without them the world would have been such a bore.
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ABSTRACT

Medicines are important commodities and their use in households continues to generate interest. In developing countries, medicines form about 30-40% of health expenditure. Most of these medicines are bought by individuals for self-medication and rarely bought on prescription. Yet as chemical products their uncontrolled use could be dangerous. It is therefore important to understand how individuals use medicines especially at the household level, and how the context influences their action, taking into consideration their beliefs, practices and socio-economic status.

The aim of the study is to investigate self-medication among households of different socio-economic categories in Accra with a view to understanding how the household context influences the use of medicine.

Four residential areas were purposively selected and sixteen households were identified in 4 distinct communities in Accra. Through the use of a unique bi-monthly monitoring tool, data was collected on medicines used by households every fifteen days over a period of five months which was enriched by interviews with mothers of these households. Interviews were transcribed and analyzed thematically together with data from the bi-monthly monitoring tool.

Results from the data show that self-medication is very high among households and cuts across all social classes; the elderly are the greatest self medicators, a practice which is encouraged by long waiting times at hospitals, easy access to community medicines outlets, knowledge of prescription patterns of doctors and advertisements. Medicines most used for self-medication include vitamins, food supplements, appetite stimulants and blood tonics. Self-medication is a reality with negative public health consequences such as resistance and over-dosing that must be watched.
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CHAPTER ONE

INTRODUCTION

1.0 Medicines: Commodities without social borders

“While medicinal products alone are not sufficient to provide adequate health care, they do
play an important role in protecting, maintaining and restoring health of people; (drugs are)
essential tools for health care and for the improvement of the quality of life” (WHO, Primary
Health Care Report, 1978)

As shown in the above quote, medicines play an important role in the lives of human beings.
They are found in some form all over the world. Medicines have been defined as “substances
used in the treatment of sickness” (Van der Geest & Whyte, 1989, p. 3). Whyte, Van der
Geest and Hardon (2002, p. 5) have also defined medicines as “substances with powers to
transform bodies”. They go further to indicate that prayer, rest, and exorcism may also have
therapeutic powers, but they are not objectified or crafted or commodified and as such,
cannot be medicines. From the foregoing definitions, it is apparent that medicines are
supposed to make people feel better. They may range from pills to tablets and syringes. They
can either be “swallowed, smeared on the skin or inserted into orifices” (Van der Geest et al.,

“Medicines have come to be perceived as the most typical representation of the
therapeutic enterprise – so much so that they have given their name to the totality of
therapeutic interventions; medicine. Both patients and curers generally regard the use
of medication as the most crucial part of therapy. So it is important to ask what is so
special about medicines and how they differ from other modes of dealing with
suffering” (Van der Geest & Whyte, 1991, p. 3)

Medicines have come to dominate our lives such that there is a pill for every disease and
from birth to death human beings use medicines. Illich (1975) has termed the preponderance
of medicines in human life as the ‘chemicalization of life’.
The need to be in good health is one thing that almost every human being desires. Apart from exercises and maintaining a good diet, medicines are usually taken to help alleviate sickness, ease pain as well as for cosmetic purposes. In fact apart from the basic necessities of life which includes food, shelter and clothing, medicines also feature prominently on the list of physical necessities for the maintenance of life (Olutunji, 2013).

Uddenberg (1990) and Van der Geest, Whyte & Hardon (1996) have underscored the importance of understanding medicines in a cultural context as they are a way of understanding health and disease across cultures. Senah indicates that medicines are cultural devices and as such, “they help people to communicate their health problems and make sense of their illness experiences” (1997, p1-2).

Pharmaceutical care constitutes an indispensable aspect of the health care delivery system. Indeed, most people equate good health care delivery with availability and accessibility to good, safe and efficacious drugs. This is because the availability of good, quality and affordable medicines constitute one way of measuring the effectiveness of a health care delivery system (Lambo, 2005).

In fact, in some jurisdictions a reliable supply of medicine is a “political stabilizer … The politician’s aware that if drug supplies fail, the stability of the government is in danger” (Korn 198, p. 34). On January 5th, 2015, the central medical stores of Ghana got razed by fire and the swiftness of government in responding to the situation, is interesting to note. Immediately the three day fire was put out, government promised building a new facility (http://www.graphic.com.gh/news/general-news/gh-200-million-central-medical-store-was-deliberately-burnt-down-report.html). A year later, the ministry of health approved the reconstruction of a new central store that will cost the country GH¢8 million (http://www.psgh.org/news/267632/Central-Medical-Store-to-be-Rebuilt.htm). The January
15, 2015 edition of the *Daily Graphic* in a story it carried out on the incident carries a quote attributed to the Health minister which assures Ghanaians that the damage to the central medical stores would not affect drug supply. This shows how important a regular flow of medicines is.

**Fig 1.1: Central Medical Stores razed by fire**

Recent advances in drug research have provided many synthetic medicines for the treatment of diseases. This has made medicines very popular and readily available (Civanera, 2008). In the developing world, one of the obvious consequences of this explosion in the synthetic medicines industry is that medicines have become very popular and very common. In fact (Bledsoe and Goubaud, 1988) observed that medicines are as popular as Coca-Cola in the developing world.

Health, it has been argued, is becoming increasingly pharmaceuticalized and commodified and more and more people conveniently “reach for the pill” at the first sign of sickness (Jayaraman, 1986). Health is being treated as a state which one can obtain or maintain through the consumption of medicines, even under adverse conditions, if one has the capital to “invest”. Senah (1997, p. 3) also shares the same sentiments when he says “health is increasingly being seen as something which costs money…Without money, man is nothing”. This aptly describes how one’s socio-economic status determines the kind of healthcare one might access and how health has been commodified.

Accompanying the increased use of medicines are the problems of self-medication, particularly the overuse of antibiotics. “Irrational” use of medicines is a worrying phenomenon and has been recognized by the World Health Organization (WHO) as a threat as it causes parasite resistance (Kunin et al., 1987).

The issue of overuse of antibiotics is so serious that in some countries, committees have been set up to look into the matter. In Vietnam, a national survey conducted in 1994 by the Vietnamese Advisory Committee for Antibiotic Use showed that bacterial strains resistant against antibiotics had expanded nationwide. The result was more serious than had been anticipated by the committee prior to the research (Okumura, Wakai & Umenai, 2002).
In Ghana as in many countries, numerous drugs and drug combinations are now available for general use and are sold directly to the public as over-the-counter (OTC) drugs. There are several pharmacies and chemical shops, especially in urban areas and there is easy access to medicines (Okumura et al., 2002). People can buy all sorts of medications over the counter even when the medicines must be procured with prescription (Okumura et al., 2002; Van den Boom and Nsowah-Nuamah, 2004).

Van den Boom (2008) has showed that self-medication is a predominant form of curative care in Ghana accounting for more than 50% of health care choice. This was more prevalent among the poor and this was attributed to the out-of-pocket payments for health care delivery which existed at the time. The problem of self-medication and misappropriation of medicines is compounded by issues of long queues in hospitals and inaccessibility to doctors. This sometimes drives individuals to seek “expeditious treatment” from places such as chemical shops and pharmacies where medicines are readily available and treatment is thought to be fast (Donkor et al., 2002; Igun, 1987; Lawan et al., 2012).

Medicines are however, chemical as well as technical products and their uncontrolled use can create problems and there is therefore the need to study the use of medicines by households. The various pharmaceutical disasters that dot history are proof of the many things that could go wrong if medicines are not handled well. The thalidomide disaster of 1961 in Britain which resulted in the birth of about 6,000 severely deformed babies is one of many examples (Chetley & Gilbert, 1986). In Africa, the 1999 case of My Pikin teething powder that killed scores of babies in Nigeria is another case of the dire effects of using substandard or fake medicines (Olatunji, 2014). Peterson (2014) also elaborates on fake medicines in Nigeria.

This study therefore focuses on self-medication practices among households of different socio-economic categories and the various factors that influence their daily use of medicines and health care. The study also investigates the consumption of medicines through
prescriptions and self-medication. It identifies common illnesses and the types of medicines that are used to treat them, focusing on malaria as a lens to understand health care itineraries among households of different socio economic class categories.

1.2 Problem Statement

While medicines are important commodities that save lives, they are still unaffordable and inaccessible in many parts of the world. In the poorest parts of Africa and Asia, about 50% of the population lack regular access to essential medicines. When available, the medicines can also be dangerous if not well used or if they are fake or counterfeited. Around 50% of all medicines are prescribed, dispensed or sold inappropriately, while 50% of patients fail to take their medicines appropriately (WHO 2002).

Issues related to counterfeit or fake medicines, self-medication, drug resistance due to “irrational” use and drug utilization have received increasing attention in the past decades (Baxerres, 2011; Donkor et al., 2012; Kamat & Nichter 1998; Okumura et al., 2002; Metta et al., 2014, Kunin et al., 1987).

There have also been numerous studies on medicine consumption patterns. These include consumers not using medicines the way they have been prescribed (Homedes & Ugalde, 1993), self-medication with prescription drugs (Hardon, 1991) etc. The study by Hardon for example revealed that people in the Philippines keep copies of doctor’s prescriptions for re-use because consultations are expensive.

There are also various studies that provide analysis of the different uses of a particular medicine. To this effect, there has been quite a number of studies on antibiotics and its use among households in different countries including Ghana (Donkor et al, 2012; Okumura et al, 2002, Kunin et al., 1987). Other studies have also focused on drug utilization and self-care practices in relation to a particular disease burden as in the case of the work of (Kigodi & Komanya, 2006; Metta et al, 2014) which focuses on malaria and its treatment. Most of these
studies have focused on communities (Donkor et al, 2012; Okumura et al, 2002; Metta et al, 2014, Senah, 1997). However, few studies have been done on a household level as opposed to communities (Baxerres, 2011, Senah, 2007).

Senah (1997) in *Money be Man* does a comprehensive analysis of the uses of medicines in the Ghanaian coastal village, Bortianor, where he studied how people in the village perceive and use medicines and how money has become an important means of acquiring healthcare.

The case, however, for the conduct of this study lies in its focus. Whilst a number of studies have focused on the use of medicines, the focus on the household as a medicine consumption unit has not been given enough attention. More importantly how socio-economic variables of households play a role in their access to and use of medicines and health care has not been examined in the literature reviewed. Besides, most studies on drug utilization and uses have been conducted in rural areas especially in Ghana and it would be pertinent to see what the trend is in an urban area like Accra.

Medicine use has generated a lot of discussion over the years. Its commodification, its marketing techniques by companies, ordinary peoples overuse of relatively cheap medicines, use of non-essential combination drugs, use of needlessly expensive drugs among others.

Research has however indicated that in developing countries, medicines form about 30-40% of health expenditure. Most of these medicines are mostly bought by individuals for self-medication and rarely bought on prescription (Hardon & Hodgkin, 2004).

It is important therefore to understand why people take medicines especially in household contexts and how individuals are influenced by the household in their medicine consumption, taking into consideration their beliefs, practices and socio-economic status.
1.2 Research Objectives

The general objective of this study is to investigate self-medication among households of different socio-economic classes in Accra with a view to understanding the way household context influence the use of medicines.

In furtherance of the major objective, the following Specific Objectives would drive the study.

1. To ascertain pharmaceutical consumption through self-medication among different socio-economic classes.

2. To find out the various factors that influence the daily uses of medicines

3. To explore the different kinds of health care offers accessed among different socio-economic classes.

4. To identify common illnesses and study the types of pharmaceuticals (antibiotics, antimalarials, herbal, etc) that are used to treat them among households of different socio-economic classes.

5. To explore health care costs among households of different socio-economic classes.

1.3 Research Questions

The study would answer the following questions

1. How are medicines acquired (through prescription, self-medication etc) among households?

2. What are the various factors that influence the use of medicines among households of different socio-economic classes?
3. What are the various factors that influence the choice of a health care offer among households of different socio-economic classes?

3. Is there a relationship between uses of medicines and socio economic class?

4. What are the common illnesses among households and what are the medicines that are used to treat them among households of different socio economic status?

5. Are there differences in health care costs among households of different socio-economic classes?

1.4 Operational Definition of Key Concepts

The study uses some concepts to operationalize variables to enable this study to be successful. The concepts have been explained below.

**Medicine:** Any substance that is ingested, smeared or inserted into orifices and is thought to effect a cure. Medicines in this context refers to pharmaceuticals, herbal medicines etc. Medicine is used interchangeably with drugs and pharmaceuticals.

**Prescription:** In this study, any medicine that is taken upon advice by anyone would be termed as prescription. Prescription is thus not limited to medical doctors but as well household members, chemical shop sellers amongst others.

**Self-medication:** A process in which individuals undertake disease prevention, detection and treatment on their own without consultation to healthcare providers; it entails self-diagnosis and use of remedies previously prescribed for similar illness and/or the purchase of medications without professional advice.

**Household:** This includes a person or group of related or unrelated persons who share the same sleeping and eating arrangements and are considered as one unit, who acknowledge an adult male or female as the head of the household.
1.5 Significance of Study

The availability and accessibility of medicines in Ghana as in many countries has led to the reality of self-medication. Research has shown that self-medication is high across countries irrespective of the stage of development (Donkor et al., 2012; Metta et al., 2014, Okumura et al., 2002)

Medicines have long held the interest of researchers as “substances with the powers to transform bodies” (Van der Geest & Whyte 2005, p. 5). A lot of studies has been done in the area however the focus on the household as a medicine consumption unit taking into consideration, various socio-economic categories of households and how that may influence medicine use has not been sufficiently explored in the literature reviewed so far.

This study intends to fill that gap and also to add on to existing literature. This study would also provide empirical evidence to show how households of different socio-economic classes use medications and the differences between them with regard to health care itineraries and self-care practices. This would shed new insights on self-medication practices and how they can be tackled.

Public health administrators and policy makers would as well benefit greatly from the findings of this study in taking informed decisions on how to tackle public health issues such as drug resistance which is a direct implication of misuse of medicines. Thus policies in public health would be better tailored to make the necessary impact as over-dosing and resistance which are consequences of self-medication have serious health implications that must be watched.

Future researchers may also benefit from some information from the findings of the study which they may use for future research.

Based on the above, the significance of this study cannot be overemphasized.
1.6 Organization of the Study

The study is organized into 7 chapters as follows: chapter one introduces the study by showing how medicines studies have changed over the years. It then moves on to state the problem at hand that and then the objectives of the study. Chapter two goes on to review existing literature of the phenomenon under study. It also discusses the theoretical framework of the study. Chapter three focuses on the social structure of the study area and the research method used for the study. Chapter four, fix and six discuss the findings of the study which have been analyzed to address the specific objectives of the study. Finally, chapter seven summarizes the study and outlines the major findings and makes certain recommendations based on the findings.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Several studies of pharmaceutical practices have been conducted over the last 2 decades by pharmaecoepidemiologists, health social scientists and consumer advocates. These studies have examined the clinical rationality of prescription practices, self-medication inclusive of over-the-counter (OTC) medicine used for acute and chronic illnesses, the purchase of nutritional supplements, (tonics and vitamins) which have questionable therapeutic value and the self-regulation of prescribed medicine dosage (Conrad, 1958; Nitcher and Vuckovic, 1994; Ross-Degnan et al. 1996; Van der Geest et al.1996; Madden et al.1997).

Medicines continue to generate a lot of discussion because they are “things” that are ubiquitous in every society and an indispensable aspect of the healthcare delivery system. They are medical as well as symbolic and the various meanings ascribed to them by users continue to pique the interest of researchers.

Medicines are as well vehicles of ideology, they change perception of health and construct illness identities. They mark social values and relations. They are means of both empowerment and dependency and create consumer demands (Nitcher & Vuckovic 1994).

2.1 Use of Medicines

As Van der Geest and Hardon 1989 define medicines as “substances used in treating illnesses” (p. 3). There are however various reasons that influence the use of medicines and how they are used. In this instant, medicine is seen as an embodiment of many things and it represents many things for the one who uses it. Illness is also a very subjective issue as
people choose when to be ill depending on even if they have the time to be ill or money to afford to be ill.

It is important to note that in as much as medicine is a chemical composition, it is also a commodity that is sold. It is the hard core of therapy and that separates it from other forms of healing such as surgery where the surgeon cannot be separated from the surgery. It is this thingness of medicines that makes it democratic. This democratic character has to do with the fact that medicines are believed to contain the power of healing in themselves. Anyone who gains access to them can apply their power (Van der Geest & Whyte, 1989).

2.2 Medicine Consumption through self-medication

In most countries, almost any medicine available on the market may be purchased over-the-counter (Ferguson, 1981). In Ghana, The Pharmacy and Drug Act, 1961 authorizes the opening of private businesses, specialized in the sale of pharmaceuticals, by people not having a degree in Pharmacy. These shops are commonly called chemical shops or drug stores. These businesses are supposed to distribute only over the counter pharmaceuticals, available without prescription, as well as those included in some national public health programs (antimalarial, contraceptives, etc.). Their owners need a minimum level of studies and once a year they have to attend training organized by the pharmacy council. Today, 10,324 chemical shops are active in Ghana and they are highly present in small villages and some slums in the city (Nyaogbe, 2015). This has made medicines very popular and available. In addition, Pharmacies are readily available and they sell all classes of medicines and can give out prescriptions too.

This availability of medicines has led to irrational use of pharmaceuticals, in particular self-medication with antibiotics which have been widely reported leading the World Health
Organization (WHO) to call attention to the dangers of self-medication as a cause of anti-
bacterial antibiotic resistance (Kunin et al, 1987).

In Vietnam, a research by Okumura et al. (2002) revealed that between 40-60% of people in Vietnam depend on self-medication. Out of 505 households, 138 stocked medicines for anticipated illness in the future. A total of 96 different antibiotics (in terms of generic type) were kept at 76 households. These antibiotics were kept mainly for coughs and diarrhoea. The self-medication group was twice more likely to use antibiotics than the other group. The study revealed that popular perceptions that are not congruent with the biomedical were prevalent.

Survey of antibiotic use in children with respiratory infections in Vietnam in 1991 revealed that 85% of the children were treated with antibiotics, 58% received inappropriate medication; the wrong medicines and/or insufficient doses. In 71% of the cases, the antibiotics were given by the patient’s household (Thu, 1997).

One of the major challenges that have been identified to surround the misuse of medicine is not following the instructions given by the prescriber. A study by Homedes & Ugalde (1993) identifies four main ways in which individuals do not stick to a regimen. People tend to forget the details of the advice given, or fail to purchase all the drugs that are prescribed, because they lack the financial means to do so. Patients sometimes stop taking the prescribed drugs or take the wrong dosage.

Self-medication is encouraged by poor and unaffordable health services coupled with few regulations controlling the sale of drugs, or weak enforcement of the existing regulations and aggressive marketing by the pharmaceutical industry (Hardon, 2004).

In this regard, self-medication has been described by Nichter & Vuckovitch (1994) as a “source of empowerment or instrument of dependency”. In their paper, they indicate that
medicines empower by curing illness and helping people regain functional health and draw attention to how self-care of a common illness constitutes self-reliance and a positive contribution to primary health care. Van der Geest & White (1989) however indicates that even though self-medication may free individuals from the “hegemony of professionals” but in so doing might shift control more directly to the pharmaceutical industry thereby causing manufacturers who are clearly in the business of influencing behaviour in the direction of greater dependence on products the public is made to feel it cannot live without it.

Kamat & Nichter (1998) focus on pharmaceutical practices and how the role played by pharmacies and pharmacy attendants fosters self-medication and medicine experimentation practices among the public in Bombay, India. More importantly, the paper focuses attention on the extent to which clients passively follow the advice of pharmacy personnel or question their motive or expertise. Attention is also focused on the role of the medicine marketing and distribution system in fostering prescription practices, pharmacy “counter pushing” and self-medication.

The factors that determined whether patients resort to self-medication was outlined by Fabricant and Kamara (1991) as follows: not enough money, few expected medicines at a health care facility, low quality care at a health care facility, knowing self-treatment and thinking the disease was not serious or recovery would be soon. According to the research, self-medication practice was positively associated with antibiotic use.

Equal concern has been expressed about the over–prescription of medicines by doctors, the iatrogenic of “illogical” medicine combinations (e.g. multiple forms of antimicrobials contained within a single medication) and the availability of substandard medicines in the market place. In addition to the problem of resistant microbial strains resulting from the inappropriate use of antibiotics, medicine side effects, allergic reactions and toxic poisoning have become a cause of alarm (Kamat & Nichter, 1998).
The rising tendency for people to self-medicate with commercial medicines has been associated with many issues. These includes marked decreases in thresholds of tolerance for symptoms, greater familiarity with medicines and medicine vendors, dramatic increases in the number of products available in the market place and changes in the purchasing power of consumers (Kamat & Nitcher, 1998). Health, it has been argued, is becoming increasingly pharmaceuticalized and commodified as more and more people conveniently “reach for the pill” at the first sign of ill health or malaise (Jayaraman, 1986).

Studying the uses and consumption of medicines also demands an investigation of popular perceptions. The global perception of some diseases leads to high rates of self-medication based on popular perceptions about health and illness within the studied societies. These popular perceptions can be developed and used not only for curative purposes, but also for prevention and maintaining health. For example, in some countries “preventive cures” are made against “palu” for paludisme, (malaria in French) with antimalarial medicines as they are with other medicines (antipyretics, vermifuges, vitamins, etc.) (Baxerres 2011).

This self-medication and “irrational” (as seen from a biomedical perspective) consumption of Artemisinin Combination Therapy, (ACTs) which is the first-line malaria treatment throughout most of the malaria-endemic world are likely to cause parasite *P falciparum* resistance by these medicines, which are currently the only effective treatment strategy for malaria. On the other hand, WHO and transnational actors promote wide distribution of these medicines through the channels of community health workers and private actors to mercantile enterprises (pharmacies, chemical stores) (Simba et al. 2010). Moreover, when taking into consideration that antimalarial medicines are sold in almost all chemical stores and pharmacies in Ghana, there seems to be widespread distribution of ACTs in Ghana that evades biomedical and pharmaceutical supervision to some extent.
The ways that medicines are used also raise questions about public health and leads to serious health implications.

2.3 Common Illnesses and Medicines Used

There are various reasons why people use medicines. In a study by Baxerres (2011) in Cotonou, Benin, the researcher investigates the reasons why there is a high intake of medicines by residents of Cotonou. Firstly, the research revealed that residents logically take medicines as a cure when they experience physical disorders. Also, people have knowledge about common illnesses which makes them confident to self-treat and when common and frequent disorders arise, people know which medicines to use. The mothers and fathers from the interviewed households in the study were familiar with many medicines that they could match to diseases or symptoms. The costs of professional treatment and the poor state of the healthcare system further encouraged self-medication among residents of Cotonou.

After self-medication, people seeking healthcare can go through a possible second step of resorting to a local specialist who prescribes treatments. The study indicates that biomedical staff working in Cotonou tend to write broad prescriptions. Given the potential seriousness of many diseases, such as malaria and respiratory infections, and due to the often-unreliable diagnostic tools in health centres, professionals prefer to write prescriptions for a broad spectrum of conditions. These include several categories of medicines and often, specifically, antimalarials, anti-inflammatories and antibiotics. The healthcare provider’s rationale is based on making sure the condition is treated and complications are avoided. Individuals then follow these prescriptions again when self-medicating. These processes lead to high medicine use. However, in addition to this curative use, there are high levels of medicine consumption especially pharmaceuticals in Cotonou. The purpose is to avoid disease and more generally, to maintain good health. For a long time, the ‘traditional’ herbal remedies were consumed mainly for this specific purpose. They are believed to have the capacity to eliminate
impurities from the body by stimulating urination; they are used as a ‘fortifier’, to “avoid
suddenly getting sick,’’ to “feel healthy’’ and to “feel comfortable’’, as people said during the
interviews. Pregnant women, infants and young children in particular, considered vulnerable
to so-called ‘innate’ diseases, and therefore take multiple herbal remedies. The shift, from
herbal remedies to pharmaceuticals means that people in Cotonou now also consume
pharmaceuticals as a preventive measure and to maintain health. ‘Popular prophylaxis’ thus
leads to increased use of medicines; medicines are taken nearly every day by those who feel
they perform strenuous work or are exposed to extreme heat, for example porters, moto-taxi
and truck drivers, peddlars walking in the sun, and women cooking on open fire.
People as well frequently take medicines when they believe they have been exposed to
conditions that could cause disease, for example, when travelling or during certain times of
the year. Intense heat and heavy rains increase, for instance, consumption of vermifuges,
vitamins, antimalarial medicines and antipyretics. Periods of worry and ‘hassles’ also require
taking medicines (Baxerres, 2011).
In Ghana, a cross-sectional survey by Donkor et al. (2012) among 600 tertiary students to
estimate the prevalence of self-medication with antibiotics was 70%. The most common
frequently used antibiotic was within a one month interval and the most common antibiotic
used was amoxacillin. Students used these antibiotics for a number of reason including cold,
cough, fever and abdominal pains. Most students cited long queues and expensive hospital
charges as the motivation in engaging in self-care practices,
The literature above points out the many problems that there are with the use of medicines
especially with pharmaceuticals which include misappropriation, from a biomedical point of
view, through self-medication practices.
2.4 Health Care Facilities in Ghana

Van der Geest et al. (1991) have suggested that any human experience always exists within particular social and cultural realities. Twumasi (1979) has also indicated that medical systems have broad-ranging ties to cosmology and the way of life of a people. It is therefore important to understand the health care offers available in Ghana to provide this study with a contextual basis of understanding the society.

Twumasi (1979) and Senah (1997) have indicated that in Ghana, there is a pluralistic health care system that exits side by side. Senah (1997) explains that the description of a plural health system is one that has biomedicine at one end and indigenous healing practices at the either. It would however be erroneous to think that these two systems work independent of each other as traditional medicine seems to have syncretized over time.

Ghana, at independence was handed over a health delivery system that is largely “urban-biased, curative-oriented and pluralistic, reflecting her colonial and post-colonial experiences and the cultures of her people” (Senah 1997, p. 47). In Ghana, health care is therefore provided through a complex channel of formal and informal health facilities and personnel. These include hospitals, clinics, maternity homes, pharmacies, chemical shops, healing homes, spiritual churches etc.

For biomedicine, or what is sometimes referred to as orthodox medicine. This refers to providers who have had a formal training in mainstream healthcare practices as officially taught at universities, are typically clinic or hospital based, and prescribe modern medicines (Van den boom et. al, 2004).

With regard to traditional medicine, Twumasi (2005) has broken this down to 3 main people; the herbalist, fetish priests and psychic healers The common feature in their healing practice to be their use of magico-religious concepts, acts, symbolism. The paper points out that it is
would be wrong to think that these traditional practitioners had no notions of physical cures and treatment as bones are set and wounds are bandaged. Stimulants and sedatives are also available.

Twumasi (1979) and Senah (1997) show that there a lot of avenues for households to seek healthcare. Gyasi et al. (2014) in a study conducted in the Kumasi metropolis and Sekyere South district indicates that there is a high prevalence of the use of traditional medical therapies among the population. The study showed that 86% of respondents have used some form of traditional medicine over a period of 12 months. The study indicates that about 72% of this number prepared and applied the medicines themselves. The study also confirms earlier literature by Twumasi (1979) and Senah (1997) that traditional medicine is used alongside biomedicine. Results from the data show that 31% of respondents used traditional medical therapies and biomedicine concurrently in the treatment of illnesses.

This study therefore seeks to investigate the health care facilities available to households and which ones they utilize in urban area like Accra as the researcher did not find any material on this.

2.5 Health Care Costs among Households

Das and Das (2006) interrogates why the poor and marginalized are often blamed for the practice of self-medication. Ethnographic interviews from the study in India, show a pattern in which boundaries between health and illness were consistently blurred and the experience of illness was split between days when people had access to small amounts of money and hence could consult a practitioner versus the days when symptoms were endured because money had run out. Thus, the typical pattern of health seeking behaviour related to the availability of cash. If there was money available then the treatment for diseases that were not considered as severe or life threatening was sought from a practitioner in the locality.
otherwise attempts were made to absorb that within the notion of the normal. The study shows that there is a relationship between socio-economic class and health care costs.

Also in a study by Kamat & Nichter (1998), though not the main focus of the study, they explored how much customers spent on an average transaction at a pharmacy. Drug sale data on 1599 customers monitored revealed that customers spent an average of rupees 14.92 paise\(^1\) at a pharmacy. The study goes ahead to find out if customers from a higher socio economic strata spend more on medicines than those from the lower socio economic strata. Information from an exit interview data with 150 customers showed that 57% of the informants from the high SES group, 77% of those from the middle (Socio-Economic Strata) SES group and 42% of those from the low SES group said that they spent more than 100 rupees per month on medicines for their household. The data suggests that people from the middle socio-economic class category spent more on medicine expenditure. The paper however admits that the number of respondents is small and the hypothesis must be tested on a larger sample.

Senah (1997), indicates that “health is increasingly being seen as something which costs money, without money, man is nothing”. From a community survey and focus group discussions, it was discovered in Senah’s study that in Bortianor about 30% of income was spent on health. Within 12 calendar months fifteen selected households spent approximately US $331 on medicines. The calculated expenditure on medicines was based on medicines purchased or credited for the treatment of health conditions. It was noted upon inspection that most of these medicines were “unnecessary” and “non-essential” (Senah, 1997:179). There was also evidence that expenditure on health care was related to a person’s earning power (Senah, 1997, p. 79).

\(^{1}\) 35 rupees equals $1
2.6 Conclusion

The literature reviewed shows that there have been a lot of work on self-medication across cultures as well as countries. It also indicates that self-medication is high among different socio economic categories. It also shows that medicines are being misappropriated from a biomedical point of view, through self-medication practices. However the focus of most of these papers on self-medication have been related to the treatment of specific illnesses or diseases. In some other papers, the focus has been on individual medicines such as antibiotics or antimalarials. The literature has also indicated that health care costs differs among households of different socio-economic categories. Some of the papers have also focused on communities.

In all of the literature reviewed, however the researcher did not find any work that had the household as its central focus in an urban Ghanaian context. This study therefore focuses on how health problems are dealt with in the household setting, the places where medicines are bought and the level to which households engage in self-medication practices.

The study also looks at the differences in healthcare costs and practices between households who occupy different places on the socio economic strata, i.e upper class, middle class and lower class. In addition, the study also examines the uses of pharmaceuticals among upper, middle and lower class households in Ghana focusing on ACTs in the urban city of Accra. The next section discusses the theoretical perspective that will underpin this study.
THEORETICAL FRAMEWORK

Social Exchange and Rational Choice Theory

In the literature reviewed, it is apparent that human relationships play a role in medicine use among individuals. Senah (1997) shows that, community members give out medicines as gifts during naming ceremonies in Bortainor, Ghana. Igun (1987) also shows how in seeking expedited treatment, the people of Maidaguri, Nigeria visit retail pharmacies retail shops as outpatient clinics.

In this regard, the Social Exchange theory by Homans (1958) and the Rational Choice Theory would by Coleman (1988) will be employed to theoretically explain the study. The social exchange theory maintains that individuals will act to secure rewards and avoid punishments. Social relationships are seen, therefore, as exchange relationships in the sense that rewards, such as approval or recognition are attendant based on certain behaviours. When these behaviours are rewarded, an individual is likely to repeat them in similar situations however if these behaviours elicit negative reactions, they are not likely to be repeated. Thus when a household buys medicine from a medicine retail outlet for a sick member of the household and the household is positively rewarded by the recovery of that member, it is likely that the same procedure would be repeated in the future. In the same vein if the medicine from the pharmacy or chemical shop does not work, the household would take other steps such as going to a clinic or hospital and might not repeat those steps in a similar situation. They might also go back but ask for different medication.

In this theory, how social relationships and the need for reciprocity fuel self-medication is instructive to note. Through the bi-monthly monitoring, many mothers indicated that they were introduced to a medicine by a neighbour or a household member. For upper class households, most of them bought medicines for their neighbours when they travelled. These
medicines were usually Garlic Capsules. This favour was most often reciprocated by the one who was at the receiving end of the gift. Households in the upper class socio-economic categories as well relied on friends in their social circles who were medical practitioners when they needed health related advice.

Thus this leads to a view of human behaviour in terms of costs analysis and benefits of rational individuals who can actually calculate the consequences of their actions before taking them. This then leads to the rational choice theory which supplements the social exchange theory in this work.

The Rational Choice Theory by Coleman (1988) borrows many concepts from economic theory. The Rational Choice theory argues that social behavior can be explained in terms of “rational” calculations that individuals make about the options available to them. That human actions are calculated and individualistic.

Part of Coleman’s mission as a social theorist was to bring the individual back into social theory. To demonstrate that social relationships or “social capital” provide significant benefits to individuals in the form of “human capital” or resources that can benefit the individual. Coleman theorizes that individuals engage in social relations because they rationally calculate or understand the benefits to be derived.

Rational Choice theory does not simply ignore social problems but traces these problems either to people’s rational choices or to the aspects of irrationality that may result from people having less than perfect information about the choices available to them or being insensitive to the long-term consequences of short-term decisions.

Relating this to the core of this study, because individuals make choices on medicine use based on options available to them and these options are believed to be “rational”. These decisions may be based on the cost, availability, convenience and knowledge of medicines.
This calculating nature to make the most “rational” decision in the use of medicines is relevant to this study as it explains why individuals would choose one method of healthcare over the other.

The problems that accompany use of medicines are aptly captured in this theory as well. This is because though individuals may know that using some medicines for certain purposes may not be the right thing to do, they do it because they are unaware of the long-term consequences of their short-term decisions.

The theories used in the explanation of the study however does not adequately explain the reason why households would choose one health care itinerary over the other except to ascribe it to the “rational” choice of the individual which might actually be irrational in reality. The rational choice is deficient in explaining that poor choices made by individuals is as a result of having less than perfect information. This is not exactly the case as the reviewed literature has shown that individuals sometimes resort to self-care not because they do not know the consequences of their actions but because they find it convenient to do it at the time even if they know the long-term consequences might be grave.

For the purposes of this study however, the theories complement each other and the case for their utility cannot be overemphasized whilst acknowledging the shortfalls as well.

This chapter reviewed relevant literature of some researchers on the study and theoretically explained the study using the social exchange theory and the rational choice theory. It also acknowledges some shortfalls of the theories that will be utilized.
CHAPTER THREE

SOCIAL STRUCTURE OF STUDY AREA AND RESEARCH METHODS

3.0 Introduction

This chapter seeks to provide detailed information on the social structure of the study area; Accra Metropolis District, La Dadekotopon Municipality, Adenta Municipality and the La Nkwantanang-Madina Municipality. It also outlines and explains the methods of data collection.

The study adopts the qualitative research method because the study is interested in understanding the depth and not the breadth of issues related to the uses of medicines among households. It employs semi-structured in-depth interviews which the study heavily relies on as well as a unique bi-monthly medicines monitoring tool.

3.1 Background of Study Area

The study is located in the Greater Accra Region. The most urbanized part of the country. The study focuses on 4 distinct areas in the region located in 4 districts to represent different socio-economic categories. These districts include La Dadekotopon, La-Madina Nkwantanang, Adenta Municipality and Accra Metropolis.
The Accra Metropolitan Area (AMA) has been the regional capital for the Greater Accra Region since 1898. In addition, it serves as the national capital of Ghana. The city of Accra is bounded to the North by Ga West Municipal, the West by Ga South Municipal, the South by
the Gulf of Guinea, and the East by La Dadekotopon Municipal. It covers a total land area of 139.674 Km\(^2\). The population of Accra Metropolitan Assembly (AMA), according to the 2010 Population and Housing Census, is 1,665,086 representing 42 percent of the region’s total population. Males constitute 48.1 percent and females represent 51.9 percent. The Metropolis is entirely urban (100%). It has a sex ratio of 93 and youthful population (children under 15 years) (42.6%) depicting a broad base population pyramid which tapers off with a small number of elderly persons (60+ years) constituting 5.9 percent. The total age dependency ratio is 48.5 percent, the child dependency ratio is higher (42.6%) than that of old age dependency ratio (5.9) (Population and Housing Census, 2010).

The Accra Metropolis houses some of the oldest and populated areas in the region. For this purpose, Accra Newtown and Kotobabi, identified as moderate and high poverty pockets were chosen to represent the low and middle socio economic class categories respectively (CHF International, 2010).

**Map 3.2: Map of Accra Metropolis with study locations Accra Newtown and Kotobabi Indicated.**

Source: Ghana Statistical Service, 2014
The La Dade-Kotopon Municipal Assembly used to be a Sub-Metropolitan Assembly under the Accra Metropolitan Assembly until June 2012 when it attained a Municipal status. Like all other Municipalities, the La Dade-Kotopon Municipal Assembly was established by Local Government Act, 1993 (Act 462) with Legislative Instrument 2133. This was in line with Government’s objective of deepening decentralization and grassroots development by reducing the size of larger Metropolitan, Municipal and District Assemblies into manageable sizes. The Municipality covers an area of 36.033 square kilometres. It is bounded on both North and West by the Accra Metropolis, on the East by the Ledzokuku Krowor Municipality and on the South by the Gulf of Guinea (Population and Housing Census, 2010).

The La Dade-Kotopon Municipal Assembly houses some of the richest areas in the region and for this purpose, Cantonments/Labone was chosen having been identified as first class residential areas with no poverty pocket (CHF International, 2010).

Map 3.3: Map of La Dadekotopon Municipal with Labone and Cantonments Indicated.

Source: Ghana Statistical Service, 2014
The La Nkwantanang-Madina Municipality is also located in the Greater Accra Region. It is one of the 16 Metropolitan, Municipal and District Assemblies in the region and was created in 2012 as part of the newly created Assemblies aimed at deepening decentralization and bringing development to the door step of citizens. La Nkwantanang Madina Municipal was established by Legislative Instrument (L.I.) 2131 and inaugurated in June 2012. It was carved out of the Ga East Municipality. The La Nkwantanang-Madina Municipality is located at the northern part of the Greater Accra Region. La Nkwantanang-Madina Municipality has 84% of its population living in urbanized areas and for this reason, Madina, which is the most urbanized part of the district with a growing middle class was chosen for the purpose of this study. (Population and Housing Census, 2010).

Map 3.4: Map of La Madina-Nkwantanang with Study Site Madina Indicated

The Adentan Municipality was carved out of Tema Metropolitan Assembly in February 2008 by LI 1888. The 2010 Population and Housing Census is the first census conducted by the Ghana Statistical Service with Adentan as a district. The population of Adentan Municipality, according to the 2010 Population and Housing Census, is 78,215. Males constitute 50.3 percent and females represent 49.7 percent. About 62.5 percent of the population resides in urban and 37.5 percent in rural areas. The Municipality has a sex ratio of 101.3. The population of the district depicts a broad base population pyramid which tapers off with a small number of elderly persons. The age dependency ratio for the Municipality is 51.1, the age dependency ratio for males is lower (49.5) than that of females (52.8) (Population and Housing Census, 2010).

Adentan serves as a dormitory town for most people who have migrated to seek employment in the service sector, industries and government institutions within the Tema-Accra metropolitan areas. Adentan is also one the fastest urbanizing parts of Accra and houses some of the nouveau rich areas of Accra, and for the purposes of this study, Adjiringanor, a suburb of East Legon, a first class residential location with no poverty pocket was chosen (CHF International, 2010).
3.2 Target Areas of Research Participants

The research population included East Legon-Ajiringanor and Cantonments for the upper class households and Madina and Kotobabi for lower class households. Within these four communities, middle class households were identified and studied as well. All of these communities are based in the Accra Metropolis, the La Dadekotopon Municipality, the La Nkwantang-Madina Municipality and the Adentan Municipality.

These areas were chosen because they have been graded as first, second and third class residential by an Accra Poverty Map, 2010 by CHF International based on the 2000 census data. This report uses three (3) main indicators to segregate the different areas in Accra. The indicators are based upon averages of housing characteristic (housing density: the number of houses in a designated area and room occupancy: number of people in a room), economic indicators (Income Level) and demography indicators (Population Density) of the residential
suburbs of the city. The stratification for this study is an adaptation of that poverty map. A detailed account of how individual households were selected is captured under the mode of selection of respondents section.

3.3 Respondents

The study was conducted among 16 Ghanaian households with at least one child under five. This is because under five children are highly vulnerable to malaria (Meta et al, 2014). The age of the children is important because of the treatment of malaria with ACTs which the study is biased towards.

3.4 Mode of Selection of Respondents

The method in selecting the households was purposive. The assembly member of each assembly area was contacted and help was solicited to locate households within the various categories in the area. The assembly member was contacted because the individual represents the minutest aspect of governance and it was presumed that the person knew a lot of households as he/she must have toured almost all of the households in his assembly area in the bid to get elected and as such, assembly members were used in locating the appropriate households in Kotobabi and East Legon.

In places like Madina and Cantonments where the assembly members could not be located, opinion leaders in the various vicinities and friends living in the neighbourhood were contacted for help in locating respondent households. The households were then grouped into the various socio economic classes based on reputation by community members. The households were also evenly distributed across the three socio-economic classes based on socio-economic markers such as residence location, number of bedrooms, number of cars owned and level of education which was used as a substitute for income as it was
inappropriate to ask households how much they were earning when the researcher first came into contact with them.

Households grouped under the upper class socio economic category had the following characteristics. A minimum of 2 or more bedrooms self-contained house, 2 or more cars, at least one parent must have completed tertiary studies.

Households categorized under the middle class socio economic category had the following characteristics. One or two bedroom house with either indoor or outdoor washroom facilities, at least one car, one parent must have completed tertiary/secondary education.

Households categorized under the lower class socio-economic category had the following characteristics. A chamber and hall or kiosk, no means of transportation and parents have minimal or no formal education.

With this characteristics in mind the researcher identified the following households in the communities chosen.

East Legon-Ajiringanor-5 (4 Upper Class Households, 1 Middle Class Household)

Cantonments-3 (2 Upper Class Households, 1 Middle Class Household)

Madina-4 (2 Middle Class Households, 2 Lower Class Households)

Kotobabi-4 (1 Middle Class Households, 3 Lower Class Households)

The reason why the socio economic class of households does not exactly correspond with residential areas is that “In respect of the nature of income levels in Accra, it is obvious that households’ incomes vary even among income zones” (www.ghanadistricts.com).

Classifying people according to income and residence is problematic in Accra as settlement patterns do not strictly reflect class patterns. With this awareness, the researcher used the insights about the settlement patterns in the study.
The number five for each socio-economic class is not representative of the social class structure of the country but this study is largely qualitative and the focus of the study is to understand the use of medicines among different socio-economic classes in Ghana. This number has also been used by (Baxerres, 2011) with reasonable success.

3.5 Data Collection Instruments

The legitimacy of any research depends on the extent to which it can be imitated on the method used. Data collection instruments thus play a very important role in research. In this regard, the study employs the use of a semi-structured interview guide and the use of a bi-monthly tool. These instruments are explained below.

3.5.1 Semi-Structured Interview Guide

Semi-structured interviews were first conducted with mothers of the households. The semi-structured interview guide took into account all the reasons for using medicines were taken into account, whether based on self-medication or biomedical prescription. In addition, the factors that influence individuals when they seek different actors in the health delivery system (public, private or informal) were also analyzed. Inventory of the domestic pharmacies of households were also done.

The choice of the mother as the first point of call is because in the Ghanaian setting, mothers are usually the ones who take care of the family and the researcher perceived that it would be appropriate to interview mothers in the bid to understand medicine use among households. Subsequently four fathers and one grandmother who seemed to have an influence on medicine use and were dealing with health problems were also interviewed using the same interview guide for the mother.
The use of the semi-structured interview guide was to gain insights into use of medicine by the households.

A semi-structured interview guide was used to conduct interviews at sixteen health related structures and professionals as well as sales points for pharmaceuticals mentioned in the interviews with members of households. The researcher arrived at this number by making a list of all facilities that had been visited by members of the households. The researcher then purposively selected various health care providers based on frequency of use by members of the households. The choice of health related facilities also flowed from information gathered from interviews with members of the households. It was necessary for the researcher to understand how some facilities operated.

The researcher keenly observed activities that were performed at such facilities during the period when interviews were being conducted. A semi-structured interview guide was used to solicit information from health professionals at clinics, hospitals and pharmacists. At licensed chemical shops, the owners or attendants were interviewed. Some of the conversation were recorded and others were not. Field notes were rigorously taken for these interactions. This was important to the study as it enabled the researcher to have an appreciation of the various contexts in which medicines were acquired by households and how health care was sought. The visit to the health care facilities was also to understand the various health care options available to households who partook in the research.
Table 3.1: Health Related Centres Visited

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<thead>
<tr>
<th>Classification</th>
<th>Name</th>
<th>Location</th>
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<tr>
<td><strong>Chemical Shop</strong></td>
<td>Elizabeth Acheampoma Licensed Chemical Shop</td>
<td>Madina Estates</td>
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<tr>
<td></td>
<td>Kwasi Gyane Licensed Chemical Shop</td>
<td>Accra Newtown</td>
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<td></td>
<td>Uncle Juu Licensed Chemical Shop</td>
<td>Madina</td>
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<tr>
<td></td>
<td>Sheila Aggrey Over-The-Counter-Medicines Seller</td>
<td>East Legon</td>
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<tr>
<td><strong>Pharmacy</strong></td>
<td>Septal Chemists</td>
<td>Kotobabi</td>
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<td></td>
<td>Madak Pharmacy</td>
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<td>Palace Pharmacy</td>
<td>Cantonments</td>
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<td>Randy Pharmacy</td>
<td>Madina</td>
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<tr>
<td><strong>Clinic</strong></td>
<td>Mrs. Duah Maternity Home</td>
<td>Accra Newtown</td>
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<td>Effan Victory Clinic</td>
<td>Kotobabi, Pig Farm</td>
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<td>Adjinganor Health Centre</td>
<td>East Legon</td>
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<td></td>
<td>St. Luke’s Clinic</td>
<td>Airport Residential</td>
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<td><strong>Hospital</strong></td>
<td>Ghana-Canada Medical Centre</td>
<td>East Legon</td>
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<td></td>
<td>Twumasiwaa Memorial Clinic</td>
<td>East Legon</td>
</tr>
<tr>
<td><strong>Traditional medicines Seller</strong></td>
<td>Auntie Fausti</td>
<td>Madina</td>
</tr>
<tr>
<td><strong>Spiritual Centre</strong></td>
<td>Church of E.L 777</td>
<td>Madina, Ashaley Botwe</td>
</tr>
</tbody>
</table>

Source: Fieldwork, November 2015- March 2016

3.5.3 Bi- Monthly Monitoring Tool

Lastly there was the use of a bi-monthly tool that highlighted a distinguishing aspect of the methodology, a bi-monthly monitoring of each household member’s medicine consumption which was conducted for five months.
This monitoring was done every fifteen days amongst households selected and this monitoring instrument captured the medicines used by each member of a household over a fifteen day period. The instrument also captured how illness episodes were treated, medicines used in treatment and the composition of the medicine as well as care costs involved in treatment of ailments.

Medicines consumed by households included all types of medicines including pharmaceuticals, herbal medicines, traditional medicines, home-made medicines etc. In fact any substance that households ingested or smeared in the treatment of ailments.

3.6 Data Collection

Fieldwork started in October 2015. The assembly members of the areas who had been contacted earlier in identifying the households escorted the researcher on the first visit which made it easier for the researcher to gain entry into these households. The assembly members had also spoken to the households prior to the visit and as such, most of the households had already agreed to be a part of the research.

Some household members however wanted to know if there would be any monetary benefits associated with the research due to the intrusive and invasive nature of the research. An explanation that it was an academic research for the award of an MPhil thesis and that it was not coming with any monetary benefits was not well received however those households agreed to be a part of the research.

In Madina, the researcher relied on friends and household members to locate households. In Cantonments and Labone, it was a bit difficult locating households and the researcher visited a couple of pharmacies in the area where with the help of a Pharmacist the researcher was able to locate one household.
The principal supervisor of this thesis who happened to fellowship with the St. Thomas Aquinas Catholic Church in Cantonments was also instrumental in soliciting the help of church members to find appropriate households for the research.

The researcher interviewed mothers of the households as and when she met a new household. This first stage of identification started in September 2015. All mothers signed consent documents which allowed the researcher entry into the household for the duration of the study.

The bi-monthly monitoring however started when fourteen (14) households had been identified and this pushed the start of the bi-monthly data collection to middle of November 2015 and data collection ended at the end of March 2016.

Other members of the households who played a role in medicine consumption were interviewed thereafter and health facilities where households frequented were visited and interviews conducted in April with the exception of two facilities where the researcher had to return on later days to conduct the interviews. Since the researcher has lived in Accra since 2008, navigating the city was very easy.

3.7 Data Analysis

The data collected from the interview after being transcribed were put under themes by the researcher. The data were captured under the headings, uses of medicines, household perception of ill health, knowledge of medicine, places where medicines are bought, medicines used for the treatment of malaria and health care options.

Based on this core information, recurrent themes were identified and analyzed in relation to the research objectives.

Data from the bi-monthly monitoring were also analysed qualitatively through the manual establishment of themes. Descriptive tables used in addition to quotes from the thematic
analysis to explain the most popular therapeutic classes and show the number of times medicines in different classes were taken.

All interviews conducted with members of the households (16 mothers, 4 fathers, and 1 grandmothers) in addition to health professionals were transcribed and analyzed thematically as well.

3.8 Ethical Considerations

The study sought ethical approval from the Ethics Committee for the Humanities (ECH) – (Clearance number -ECH 065/15-16).

Ethical consideration was therefore given to all households where data was collected. Consent was sought from members of households providing information in the form of oral and written, signed consent forms. During interviews all responses were confidential.

All respondents were given pseudonyms to ensure confidentiality and anonymity. At a point in the study, the researcher felt that some of the households found the study intrusive. The researcher dealt with this by explaining that all information gathered would be only for academic purposes and again assured households of confidentiality and anonymity.

3.9 Challenges

The selection of the respondents was largely purposive with help from friends, work colleagues, assembly members of the various communities.

The researcher started off the data collection process with a total of 14 households. 5 each from the lower and middle class and 4 from the Upper socio economic class. Due to the difficulty in finding such a household in the areas chosen especially with the requirement of having one child under 5, the plan was to find the last household as the research work progressed. This household was found towards 3 months to the end of the study. In addition,
one household had to be replaced within the data collection frame because they moved to a
different residential location which the research did not cover.

The data collection approach of visiting households every 15 days to collect data on their
medicine consumption was a bit intrusive and at a point in time, some households’ part of the
study got tired and would not pick calls of the researcher when it was time to visit. The
researcher was thus not able to reach households every fifteen days as scheduled but between
twelve and twenty one days.

Some households also travelled out of the country in the course of the research which made
monitoring difficult. Other households became hostile. For three households, the monitoring
had to be stopped after three, five and six monitoring rounds respectively.

At the end of the six months, ten households had stayed throughout the research, one
household had been replaced and one household was found three months into the data
collection.

At the point when the researcher was almost wrapping up with data collection, she realized
that perhaps most households chose to be silent over medicines they were taking regarding
reproductive health. Most of the mothers who participated were still in the child bearing age
and might be taking some form of birth control however not one of any such medication was
recorded for all sixteen households. The researcher suspects that households voluntarily left
that information out either because they thought it was too private or because the researcher
did not emphatically ask for medicines related to that but generalized all medicines.

This chapter presented the social structure of the study area and the methodology used in
conducting the research.
CHAPTER FOUR

EXPLORING ILL HEALTH AND SELF MEDICATION

4.0 Introduction

This chapter entails an evaluation of the socio-demographic data which helps in understanding certain behavioural characteristics of the households studied over the period of five months. The socio-demographic profile presented in this chapter includes; age, religious background, residential location, house arrangement and socio-economic class. This helps give the researcher give a clear representation of the participants of the study as well as make deductions on the subject under research. The chapter then goes ahead to explore common illnesses among households, concepts of illnesses and how categorization of illness influences therapeutic itineraries and how that subsequently leads to self-medication. The chapter as well discusses knowledge of medicines and the determinants of choosing a health care facility. In addition, who pays for health care costs in the household is discussed in this chapter.

4.1 Socio Demographic Profile

The table below presents a description of the sixteen households the researcher interacted with over the five months period and the various socio-economic categories in which they are placed. Information on age range of parents, housing arrangements, religion and ownership of a vehicle is presented here. It is interesting to note that upper class household sizes were large. This must be because of the presence of axillary staff and other household members other than the nuclear household who were in some cases poorer dependent relations. Middle class household sizes were the smallest, followed by the lower class socio-economic category.
Findings from the data on average number of households, religion, forms of transportation and housing arrangements are presented in the table below.

**Table 4.1: Socio demographic profile of households**

<table>
<thead>
<tr>
<th>Socio–Economic Class</th>
<th>Average per family</th>
<th>Religion</th>
<th>Forms of Transportation</th>
<th>House Ownership</th>
</tr>
</thead>
</table>
| Upper Class-5        | 7.5                | 2 Catholics  
1 Methodist  
1 (Father- Muslim,  
mother- Catholic) | 6 4x4’s, 7 Saloon Cars  
1 van | 1 Government Property, 2 Renting, 1 owned. |
| Middle Class-6       | 5                  | 1 Presbyterian, 1 Methodist  
1 Catholic, 3 Charismatic | 4 4x4’s, 2 Saloon Cars | 3 Renting, 1 Personal Ownership, 1 Government Property, 1 family House. |
| Lower Class-5        | 6                  | 1 Presbyterian, 2 Evangelical, | No form of transportation | 1 family House, 1 squatter, 3 renting |

**Source**: Fieldwork, November 2015- March 2016

There were 2 Muslim households and 14 Christian Households representing 12.5% and 88.5% respectively. This does not exactly represent the national average of Christians to Muslims in the country which is 71.2% and 17.6% however it inches close to that (Ghana Statistical Service, 2012). All upper class households had at least one car. 3 households in the upper class socio-economic categories had more than 3 cars each. All members of the middle class socio-economic category had at least one car with the exception of one household. Housing arrangements were varied. Members of the upper class socio-economic categories lived in houses that had at least 3 bedrooms. Some of these houses were personally owned whilst others were either rented or government property. Three households of the middle class socio-economic category were renting houses, one household owned their house,
another lived in a household house and the fifth household was living in a government property. All lower class socio economic category members lived in 2 unit rooms locally called “chamber and hall” which they were renting. One household was squatting on a property. These differences in the housing arrangement, transportation and household size helps the researcher to understand the various socio-economic contextt in which medicines are utilized.

**4.1.1 Description of households: Age and Profession**

The findings from the data collected indicates that mothers were between the ages 22 and 38 years. The sex of respondents is a very important factor to consider when dealing with social problems however in this study, because analysis was being done from the household setting, age and gender did not play a critical role in the analysis. The age range of all the mothers and fathers of the households, together with their profession are shown in the table below.

**Table 4.2: Age and profession parents**

<table>
<thead>
<tr>
<th>Description of Families</th>
</tr>
</thead>
</table>

**Age**
- Age range of Mothers (22-38)
- Age range of Fathers (34-49)

**Profession of mothers**
- Upper Class (Cookery Teacher, Banker, Architect, Housewife, Law Student)
- Middle Class (Secretary, 2 Teachers, Cashier, Housewife, Trader)
- Lower Class (Seamstress, Cleaner, Hairdresser, Food Seller, Housewife)

**Profession of Fathers**
- Upper Class (Mechanical Engineer, Real Estate developer, Farmer)
- Middle Class (Police Man, SHS Teacher, Sales Rep, Assembly man)
- Lower Class (2 Carpenters, Electricals Dealer, Tailor)

**Source:** Fieldwork, November 2015- March 2016
It is important to note that there are major differences between the professions of parents in households of the different socio economic classes. All parents in the lower class socio-economic category were engaged in blue collar jobs whilst the upper and middle class households had most parents working white collar jobs. This was important in placing households in different socio-economic categories. There is also an appreciable difference between the ages of mothers and fathers. Whilst mothers were between the ages of 22 and 38, fathers were between the ages of 43 and 49.

4.2 Exploring Common Illnesses

Common illnesses that had affected households during the five (5) month period that the bi-monthly monitoring was recorded and interviews conducted is discussed here.

Data from the Ghana Health Service in 2010 indicate that the top 5 morbidity from the outpatient department is malaria, upper respiratory tract infections, diarrhoeal diseases, skin diseases and hypertension. With Malaria representing 47.4%, 7.7%, 3.6%, 4.0% and 3.0% respectively for upper respiratory tract infections, diarrhoeal diseases, skin diseases and hypertension.

Data from the first half of 2015 however indicates that the malaria burden has decreased to 0.43% for children under five (5) and 0.54 for people above five (5) years old. There were however dynamics across regions and the Greater Accra region had the third lowest rate of malaria.

Data from this study shows that illnesses that necessitated the purchase of medicines or a visit to the health centre included cold, malaria, skin diseases and headaches. The table below shows the most common illnesses among households over the period of study.
Table 4.3: Common Illnesses among Households

<table>
<thead>
<tr>
<th>Socio Economic Class</th>
<th>Managed Illnesses</th>
<th>Recurring Illnesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Class Households (5)</strong></td>
<td>Hypertension 4 out of 5 households</td>
<td>Malaria, Cold, Cough</td>
</tr>
<tr>
<td></td>
<td>Diabetes 1 out of 5</td>
<td>Glaucoma 1 out of 5</td>
</tr>
<tr>
<td><strong>Middle Class (6)</strong></td>
<td>Hypertension 2 out of 6 households</td>
<td>Malaria, Cold, Cough, Skin Rashes, Stomach problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lower Class (5)</strong></td>
<td>Hypertension 1 out of 5 households</td>
<td>Malaria, Cough, Cold, Stomach problems</td>
</tr>
</tbody>
</table>

**Source:** Fieldwork, November 2015- March 2016

There were four (4) households that were managing hypertension and one (1) household that was managing both glaucoma and diabetes as well and this meant that they were on regular medication.

Cold and cough was however the most common illness found in the households, this was followed by treatment of malaria, stomach problems and skin rashes. This high number of upper respiratory tract infections recorded during the bi-monthly monitoring must be as a result of the period between which the data was collected which was in the dry season as well as generally low levels of Malaria in the Greater Accra region.

Cold and cough were the most common illnesses followed by Malaria and then skin rashes. Skin rashes were very much prevalent among members of the low socio-economic areas whilst this was non-existent among households of upper socio economic class categories. Just two (2) cases were recorded from the middle socio economic category. Some form of skin rashes was however associated with all five (5) households of the low socio economic category. This must be because the sanitary conditions of the lower class areas festered such diseases.
Below is a picture of a neighbourhood at Kotobabi where one of the respondents lived. The wooden kiosk structure on the left of the gutter was the residence of one household.

**Figure 4.1: A neighbourhood in Kotobabi.**

Source: Fieldwork, November 2015- March 2016

High blood pressure however was present among all classes of households however it was more prevalent among the upper class households. Except for one household, all upper class households had at least one member of the household taking medication for blood pressure. Two (2) members of two (2) households each in both the middle and lower class categories had high blood pressure.
4.3 Conceptualizing Ill Health

“I wish I really knew what you mean about being sick: Sometimes, I felt so bad I could curl up and die but had to go on because the kids had to be taken care of and besides we didn’t have the money to spend for the doctor.- How could I be sick” (Koos 1954:30)

The above classic quote of Koos from his work *The health of Regionville; What the people thought and did about it* typifies the subjective nature of illness and what illness can mean for different people depending on factors such as time and money. For the households studied, as shall be seen shortly, it was more a matter of time than financial constraints.

For many households, what they defined as ill health was consonant with not being able to move out of bed and being totally immobilized. Otherwise, if they could move about, they considered it just a “little health” problem. This reverberates with what was found in the literature showing that people tend to define what illness is to them subjectively and this may depend on a number of factors such as “making time to be sick” and “not having enough money” (Vuckovic, 1999; Homedes and Ugalde, 1993). For the households studied, it was mostly about classifying the illness as not being serious enough to warrant urgent medical care. The responses were similar irrespective of socio-economic classes.

“…Usually when we feel we are sick, we go and buy medicine and sometimes too we go to the hospital. Maybe your head is aching then you will go and buy Para and take it but if you take it and it does not go then you go to the hospital…”
(Favour, Middle Class Respondent)

“…Sometimes my head aches, I go and buy Para and chew and that one too will stop. If maybe I would go to the hospital then maybe if I take those medicines and it does not stop then I take it to the hospital…”
(Mavis, Lower Class Respondent)

“… If it is something that you can either leave it to go by itself or just counter medicines, we would get the medicines but if it is something that is quite complex, then the doctor will come in and do the test. Complex is more like... if you have just like a minor runny nose or a cough, that is not like chesty or that doesn't bring the yellowish phlegm, that one you can just leave it but when you start seeing that the phlegm is yellowish, then it is infected and you have to call the doctor”.
(Safia, Upper Class Respondent)
4.3 Perceptions of ill health

Households had interesting ways of conceptualizing illnesses. Some perceptions associated with the stomach, head and blood are discussed below.

4.3.1 Stomach

It was only after the individual had frequented the toilet too many times in a day with watery stool that most people thought it was serious enough to warrant hospital attention. Also if someone felt sharp pains or felt a lot of pain in the abdomen, it is considered as a stomach problem. Medicines that were associated with self-care regarding such stomach “problems” includes ORS, Amoxycillin, Penicillin V, G tablets and Zinc Tablets. Generally, antibiotics were taken a great deal when dealing with stomach problems or when households perceived there were sores in the stomach that had to be healed. One mother indicated that she felt the stomach problems were from sores that were yet to be heal from her last pregnancy.

“…because I just gave birth, when my stomach worries me then I will go and buy some (referring to medicine given earlier at the hospital) and take it so that the sores in my stomach can heal...”
(Mavis, Lower Class Respondent)

“…As for Amoxycillin if you have a sore in your stomach it will kill it, it kills sores a lot…”
(Favour, Middle Class Respondent)

4.3.2 Head

When any illness was associated with the head, households usually took some antipyretics popularly known as painkillers. Some popular ones are Paracetamol, Tylenol®², Efpac®, Teedar® etc. It was only when the headache came with an increase in temperature as well that members of the household thought about giving out malaria treatment. With children, the

² The ® sign indicates branded medicines whilst medicines without the ® are generics. Generics are copies of originally patented medicines.
first treatment was Paracetamol Syrup or Teedar® and when the situation did not improve, in many cases, an antimalarial was added to the medicines taken. If the situation did not get better, the person was then taken to the hospital.

“…At times, it is the stress. When I work. I stand and work too long so I feel tired and I would be having some headaches. Some slight so I take some Para…” (Doris, Middle Class Respondent).

4.3.3 Blood

Some members of the households had some perceptions of how the blood of parents played a role in the health of the children.

“…How healthy you are depends on how your blood is and how the man's blood is and based on that if you give birth the child would also be in good health. There are some people that the woman and the man's blood do not meet so when they have children, the children become sicklers…” (Gladys, Low Class Respondent)

Some mothers also had the notion too that during the menstrual period, a lot of blood is lost therefore blood tonics must be taken to make up for the loss of blood.

“…As for the blood tonic, as you well know, every female menstruates every month. As such ever so often, once in a while, you must take some blood tonic to replace the blood that you have lost …” (Ophelia, Middle Class Respondent)

4.4 Steps to Restore Ill Health (Therapeutic Itineraries)

The therapeutic itinerary choice by households is mainly dependent on how “serious” a household considers an “illness” to be. Illnesses can therefore be classified into four (4) main types based on this classification

The first type of illness observed in the field of study is what the researcher has classified as “Not Serious Illness”. These illnesses are perceived to go after a while and the popular health
care choice is self-care or self-medication with medicines that are usually kept in the home for first aid such as antipyretics/analgesics, anti-diarrhoea medicines, ointments etc. These are illnesses that do not prevent or interrupt daily life activities eg. Headache, cough, high temperature, and stomach pains. The same approach was found to be common in all three (3) socio-economic categories.

An exception was however made for very young children in most cases. This was because their parents indicated they are a lot more vulnerable and cannot articulate their concerns. This again agrees with findings from Senah (1997) where a study in Bortianor, Ghana revealed that an individual’s position in the household network influenced health care possibilities. The study showed that children and young adults receive more health care attention than sick older men and women. This was because older people were had virtually come to the end of their lives and as such can die peacefully.

“… As for him (referring to child) I don't buy drugs for him. When I see that he is not feeling well, I rush him to the hospital. He is not able to tell me what is wrong with him so I have to send him to the hospital so they prescribe medicine for him. If it is me or my husband, we can do with first aid or go to the Pharmacy …” (Doris, Middle Class Respondent).

“… when she is sick (referring to child, i take her to the hospital, i don't want to risk her life by going to the pharmacy or going to the chemical shop to buy. She is too young. Because she cannot explain what exactly is wrong with her so when you go to the hospital, at least they have been taught and they know…” (Anthonia, Upper Class Respondent).

In this study however, even though children were given a lot more attention when they were sick, adults were not neglected. Grandparents who had fallen sick in the village were brought in to Accra for quality health care services by their children. This must also be because of the presence of the National Health Insurance Scheme which is free for the aged (above 70).

There was an instance of this scenario in one lower class household.
Self-medication was followed in some cases by a second visit to a medicines retail centre if the first aid did not solve the problem. This is in consonance with findings from Vietnam where a study by Okumura et al. (2002) categorized self-medication into two parts. The first part involved self-treatment with medicines at home with are either those bought before illness developed, leftover medicines that had been previously prescribed and the second part involved purchasing and taking medicines without consulting healthcare professions in the event of an illness.

It is when this does not work that the illness is classified as a “serious” and the hospital is visited immediately in most cases. Socio-economic class plays a role in the kind of health care facility that is accessed but not in the decision of whether to visit a health care facility or not. The amount of time that was presumed to be spent at the health centre was a major determinant in influencing the choice of whether households went to a health care facility or not.

If the illness is one which has been sent to the health centre before, the left over medicines the previous visit is first dispensed and sometimes augmented with visits to the pharmacy or chemical shop for the same prescription. This was across board for all socio economic classes.

The third category of illness has been classified as “Spiritual” illness. Spiritual illnesses were those that were thought to have “spiritual” implications. In such cases, faith based organizations were suggested but almost all mothers believed that faith played a major role otherwise that form of healing would not work. This can be compared to the work by Homedes and Ugalde (1988) where doctors prescribed medicines for patients even when they did not need them but looked at the time patients has spent and how long they have travelled.

“… When you are sick and you go to the hospital and the doctors check you for a long time but are not seeing the disease, when you go to see a pastor and you are prayed
for and you believe it, the disease would go but if you go to the prayer centre and they are praying for you and you do not believe in what is being done, the disease would only get worse.”
(Gladys, Lower Class Respondent)

“When I see that as for malaria, it is some mosquito that has bitten you and you are sick, you go the hospital and you would be given medicine but if someone is mad and is behaving abnormally, if you take the person to a prayer camp and the pray for the person, that one too the person would be well…”
(Favour, Middle Class Respondent)

Most mothers however did not believe that the prayer centre or a faith based organization was the best place to go in dealing with health problems. Most of them admitted that they prayed on a regular basis however going to a faith based organization to get cured for an ailment which they thought needed biomedical care was not the best.

“When we go for prayers, we go and pray but I don’t go because I am sick but I can go on my own to go and pray but not because I am sick…”
(Mavis, Lower Class Respondent).

4.5 Self-Medication
Closely related to therapeutic itineraries is the issue of self-medication. Studies (Donkor et al, 2004; Habtom and Ruys 2007; Okumura et al, 2002, Van den Boom, 2004) have shown that self-medication is the most common therapy choice for most people especially in less developed countries. Individuals rely on drug retail outlets such as pharmacies and chemical shops as well as informal drug sales outlets for “expeditious treatment” (Igun, 1987, p. 689). This phenomenon of self-medication formed a major part of all health care itineraries recorded during the course of the study. Most households started almost all health care itineraries with some form of self-care.
4.6 Self-Medication to Cure or Maintain Good Health?

The most common form of self-medication were those ones that were targeted at effecting a cure. It was rare to find households who were taking medicines daily to prevent any particular illness. In two households however, there were some home-made herbal preparations that were taken on a daily basis to prevent Malaria. This was however done usually after a malaria episode to totally “clear” the parasites from the blood stream.

Reliance on self-medication to cure illnesses was the most common of healthcare choice found among households. This curative approach must be from the health care delivery system that exists in the country. Senah has indicated that Ghana’s health care delivery system since the attainment of independence has been “curative-oriented… reflecting the colonial and post-colonial experience” (1997, p. 47)

Households did not take medicines in most cases unless they were sick and felt they needed some medicines to make their discomfort go away. In these scenarios it is important to consider how much “self” there is in self-medication. In as much as some of these households knew which medicines they should buy, most of them often relied on the advice of the a chemical shop attendant medicines counter assistant or pharmacist and in some cases household members and friends.

“…If the children are hurting somewhere or experiencing pain somewhere, I go the owner of the drugstore and say that the child's body is hot. Sometimes too I say their head is aching then they themselves would give us medicine and when I come and use it on them too they get better…”

(Gladys, Low Class Respondent).

“…he really knows his medicines. He would not just give you any medicine. Sometimes if you go and ask for a particular medicine, he would ask you who is taking the medicine. When you tell him who is taking it, if it is good for the person,... if it is a child that is taking it and it is good for the child, he would give it to you and if it is not good for the child too he would tell you that it is not good for the child and that you might need to add another medicine.

(Ophelia, Middle Class Respondent)
Figure 4.2: Some medicines that had been obtained by Ophelia based on the advice of a chemical seller to treat her children for what she had diagnosed as malaria with a cough.

Source: Fieldwork, November 2015- March 2016

The distinction between maintaining good health and prevention is rather thin as maintaining good health by taking vitamins and tonics is one way to prevent illness by building the body’s immunity thus to say that self-medication to prevent was rare and almost non-existent is a dangerous path to thread however insofar as the aim of those health care treatments was not targeted at any one illness as in prophylaxis, it might be safe to say that self-care was centered on maintaining good health as opposed to preventing any one particular illness. To this extent, there were a great many tonics and vitamins that were used by households. Vitamins, in addition to food supplements and appetite stimulants accounted for 20.5% of all medicines taken by households. This amounts to the biggest category of medicines used by families during the 5 months that the researcher monitored the medicine intake of households. This finding agrees with the work of Okumura et al (2002), in Vietnam where Vitamins made up 32.6% of all household medicines stocked at home.
“… As for the multivitamins let me just say on tele they will be saying when you give the child this multivite, the child will eat. Eh herh... So me I always buy it because of the eating...”
(Laurie, Middle Class Respondent)

Even though vitamins were very popular in household pharmacies. It is interesting to note that the brands were very different with respect to the different socio-economic categories. Also upper class socio-economic households consumed more vitamins and food supplements as opposed to blood tonics whilst those in the middle and lower socio-economic classes did the opposite. This differentials might be accounted for by socio-economic class differences and the kind of work that is done by parents in these different socio-economic categories.

Table 4.4: Vitamins and Socio Economic Class

<table>
<thead>
<tr>
<th>Socio-Economic Class</th>
<th>Vitamins and Supplements</th>
<th>Blood Tonics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper Class</strong></td>
<td>Chewette® Vitamin C 100mg, Jamieson® Sources Naturelles B12, Nature's Way® Vitamin E-400, Cold Pressed Evening Primrose Oil®, Health Aid® Vitamin E, Health Aid® Balanced Omega 3.6.9, Health Aid® Vitamin A, Fitness Pharma® Food Supplement, Vitane® Oral Liquid, Liva Garlic Plus</td>
<td>Apetamine®, Zincovit® Syrup, Vitabiotics® Feroglobin Capsules</td>
</tr>
<tr>
<td><strong>Middle Class</strong></td>
<td>Supermin G®, Alpha Odourless Garlic Capsule®, Clean Shield Liquid Supplement, Kingdom Garlic Capsules, Haemoglobin Syrup with VitaminB12</td>
<td>Mighty Power Tonic®, X'feron Syrup®, Kidiron Tonic®</td>
</tr>
<tr>
<td><strong>Lower Class</strong></td>
<td>Abyvita® Syrup, Ascoryl® Syrup of Vitamin C, Ascorbin® Vitamin C, Folic Acid, Minamino® Compound Syrup</td>
<td>Vitaforce® Syrup, Zinvite Liquid, Durol® Junior Palatable Oral Tonic, Ferrodex® (Blood Buider), Zincovit®</td>
</tr>
</tbody>
</table>

**Source:** Fieldwork, November 2015- March 2016
4.7 Common Medicines and Reasons for Use

There were a lot of medicines that were used by households over the period of 5 months. Below are some of the most popular therapeutic classes and for what illnesses they were used for.

**Table 4.5: Common medicines and reasons for use.**

<table>
<thead>
<tr>
<th>Therapeutic Class</th>
<th>Reasons for use</th>
<th>Examples</th>
<th>Local Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics</td>
<td>Cough, Stomach pains, Skin Rashes</td>
<td>Amoxycillin, Zithromax®, Floxacillin, Cloxacillin</td>
<td>Abombelt</td>
</tr>
<tr>
<td>Anti-Dairrhoea</td>
<td>Stomach problems Runny Stomachs</td>
<td>Metronidazole, Transcillicate, Zintab, ORS</td>
<td>Flagyl G Tablet</td>
</tr>
<tr>
<td>Anti-malarials</td>
<td>Malaria</td>
<td>Lonart®, Plasmotrum®, Camoquine®, Lumert®, Lumether®, Teedar®, Coartem®</td>
<td>44, Malaria Eduro (Malaria medicine)</td>
</tr>
<tr>
<td>Cough Suppressants</td>
<td>Cough/Cold</td>
<td>Menthol®, Stopkof®, Samalin®</td>
<td>Benylin®,</td>
</tr>
<tr>
<td>Topical preparations/ Ointments</td>
<td>Skin Rashes, Bites</td>
<td>Penicillin Ointment, Surfaz®</td>
<td></td>
</tr>
<tr>
<td>Multivitamins and Blood Tonics</td>
<td>Multivitamins and Blood Tonics</td>
<td>Durol®, Zincovit®, Vitaine®, Zincos® Ferrox®, Zipfereon®</td>
<td>Mogyaduro “mogy-blood, duro-medicine = blood medicine”</td>
</tr>
<tr>
<td>Antipyretic</td>
<td>Headaches</td>
<td>Efpar®, Procold®, Paracetamol, Advil®, Paracetamol Syrup, Teething Mixture (Teedar®)</td>
<td>Para</td>
</tr>
<tr>
<td>Dewormers</td>
<td>Deworming</td>
<td>Zentel®, Wormplex®, Vermox®</td>
<td>Sunsun eduro “sunsun-worm ,edo-ro-medicine = worm medicine”</td>
</tr>
</tbody>
</table>

Source: Fieldwork, November 2015- March 2016
At the end of the 5 months bi-monthly monitoring, medicines had been taken 587 times by all sixteen (16) households. These are not single medications but rather, the number of times these medicines were taken by a member of the household. Some households had members who were managing chronic illnesses such as hypertension and diabetes and as such they took medicines each day. For each time that medicines were taken, they were recorded even if it was the same medication. It is therefore the single times all medicines were taken that is represented. Below are ten (10) of the most popular classes of medicines which had been used by households across the different socio-economic classes.

Table 4.5: Top 10 Classes of Medicines Used

<table>
<thead>
<tr>
<th>Medicines</th>
<th>Lower Class</th>
<th>Middle Class</th>
<th>Upper Class</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analgesic/Antipyretic</td>
<td>Number of times Used</td>
<td>33</td>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>% within med</td>
<td>40.7%</td>
<td>37.0%</td>
<td>22.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>20.2%</td>
<td>22.4%</td>
<td>6.2%</td>
<td>13.8%</td>
</tr>
<tr>
<td>Vitamin supplement</td>
<td>Number of times Used</td>
<td>8</td>
<td>7</td>
<td>52</td>
</tr>
<tr>
<td>% within med</td>
<td>11.9%</td>
<td>10.4%</td>
<td>77.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>4.9%</td>
<td>5.2%</td>
<td>17.9%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Anti-hypertensive</td>
<td>Number of times Used</td>
<td>3</td>
<td>1</td>
<td>53</td>
</tr>
<tr>
<td>% within med</td>
<td>5.3%</td>
<td>1.8%</td>
<td>93.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>1.8%</td>
<td>.7%</td>
<td>18.3%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Ophthalmic preparation</td>
<td>Number of times Used</td>
<td>3</td>
<td>3</td>
<td>38</td>
</tr>
<tr>
<td>% within med</td>
<td>6.8%</td>
<td>6.8%</td>
<td>86.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>1.8%</td>
<td>2.2%</td>
<td>13.1%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Food supplement</td>
<td>Number of times Used</td>
<td>3</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td>% within med</td>
<td>7.1%</td>
<td>11.9%</td>
<td>81.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>1.8%</td>
<td>3.7%</td>
<td>11.7%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Antibiotic</td>
<td>Number of times Used</td>
<td>18</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>% within med</td>
<td>43.9%</td>
<td>39.0%</td>
<td>17.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>11.0%</td>
<td>11.9%</td>
<td>2.4%</td>
<td>7.0%</td>
</tr>
</tbody>
</table>
From the table above, it is apparent that the largest constituent of medicines taken by households were antipyretics and analgesics and these were consumed by a majority of the low class socio-economic categories at 33%. This must be because a lot of the members of these households have blue collar jobs such as carpentry, cooking and sewing where a lot of energy is expended through vigorous activity and long periods of standing. This agrees with literature from Cotonou where (Baxerres, 2011) reports that medicines are taken nearly every day by those who feel they perform strenuous work or are exposed to extreme heat, for example porters, moto-taxi and truck drivers, pedlars walking in the sun, and women cooking on open fire.

The second largest component of medicines were vitamins and these were patronized mostly by households in the upper class socio-economic categories. Households in the upper class...
socio economic categories took vitamin supplements 52 out of the total 57 times that vitamin supplements were used. If food supplements and appetite stimulants are added to this category, it becomes the largest component of medicines taken. Anti-hypertensives have also been taken but chiefly by upper class households. This must also be because of lack of exercise because of the white collar nature of work members of the upper class socio-economic categories were engaged in. Anti-hypertensives accounted for 9.7% of all medicines used.

Other therapeutic classes that have been utilized by households include anti-malarials (6.8%), antibiotics (7.0%), and ophthalmic preparation (7.5%). It must however be noted that 86.4% of all ophthalmic preparations was used by one member of a household who had Glaucoma and as such had variations of preparations.

Other classes that are not captured in the table include herbal preparations (3.9%), anti-allergy/emetic (2.7%), appetite stimulant (1.9%), nasal decongestant (2.6%), anti-helminthic (1.7), antacids (1.0%), anti-asthma (0.2%), anti-diabetic (1.0%), anti-convulsant (0.3%), anti-depressant (0.2%), anti-fungal (0.5%), antiseptic (1.7%), anti-spasmodic (0.3%), fluid replacement (1.5%), , anti-diarrhoea (0.3%), anti-gout (0.2%) and anti-histamine (0.2%).

4.7.1 Anti-helmintics (Dewormers)

Dewormers were quite popular among households. Most households took it religiously almost every three (3) months. Some mothers indicated that the reason for deworming was to clean “dirty” stomachs.

“…… we usually take them, the whole house, we take and I put down dates. When it is 3 months’ time, I repeat again…”
(Houda, Upper Class Respondent)

“…They say every three (3) months we have to take the medicine for the worms for both children and adults …”
(Mavis, Lower Class Respondent)
Skin rashes were also associated with worms and mothers sometimes bought dewormers for their children when they had skin rashes.

4.7.2 Garlic Capsules

Garlic Capsules have gained a new popularity among households. Six (6) out of eleven (11) households in the Upper and Lower Socio Economic Class Categories consumed some sort of Garlic capsules.

“…I take the Garlic capsules to burn some fat and I learnt the Garlic capsules helps... It helps with the heart and it helps with blood circulating and all that…”

(Marissa, Upper Class Respondent)

The popular perception was that it aids in burning of body fat and was good for maintaining good health. The popularity of garlic capsules must also be from their pronounced advertisement on radio. Some of the Garlic capsules that were being used among households include Kingdom Garlic Capusles, Alpha Odourless Garlic Capsules, Liva Garlic Capsule, Holland & Barret Odourless Garlic. Of these four (4), the first two were heavily publicized on radio.

4.8 Socio Economic Class and Medicine Brands

There were palpable differences with medicines that were used by households. Whilst most Upper Class households purchased brand medicines, most lower class households preferred generics because they were a lot cheaper. The members of the lower class households did not specifically ask for generics in such cases but opted for cheaper alternatives.

“There was this medicine Nasil… Nasal something, as for that one, we roamed a lot of places but we were not getting it. So we went to buy it at Circle. There is a really big Pharmacy there. Even at that time, they sold it to me at 25 Ghana Cedis. So recently the child was not breathing properly so i remembered and went to Wofa's place (Licensed chemical seller) to go and buy some and when i went there and how

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3 It is interesting to note that some generics that are not original versions of pharmaceutical formulations are being branded at cheaper costs.
much was it? It was 7 cedis!

Interviewer: The same thing?

S: It's the same thing. There is no difference. Hmm hmmm but sometimes if you go, they will tell you that this one is from America. Hmmm hmm and this one too is from Ghana but it is good. So what makes the man's place preferable is that he will explain things to you…”
(Susanna, Lower Class Respondent).

This is in agreement with Tan’s work which indicates that the concept of “generic drugs” was practically unknown to most Filipinos (1998:187). Some mothers especially in the upper class category however indicated that they preferred branded products or U.K products as opposed to medicines coming from India and China. It is interesting to note that most mothers or fathers, referred to medicines from Europe or the USA as branded medicines whilst those from China and India were thought to be generics which were inferior. A closer look at the manufacturing details of medicines from the home pharmacies however showed that some medicines though European or USA brands, were produced in India or China. This however, did not register with mothers or fathers. Most were more interested in the country that was associated with the medicine and there was preference for medicines perceived to be coming from Europe, USA or the UK as opposed to those coming from Asia especially with families in the upper class socioeconomic categories.

“…I would normally not buy these drugs... I think they are of a lower quality. I believe so… so if I can ... I would opt for a foreign drug. I mean drugs from US, blah blah blah. I would not opt for an Indian drug”.
(Marissa, Upper Class Respondent)

The difference however was not that clear for medicines bought at the hospital by households, the major difference was who the doctor was and what he preferred to prescribe. Households that patronized private health facilities and used private health insurance had a number of branded medicines but this was not the case in all upscale hospitals. One clinic located in an upper class socioeconomic area dispensed locally manufactured medicines. The
doctor in an interview indicated:

“…We know the medicines to prescribe for each situation. Sometimes, the brand does not really matter but there are situations too that we use the brand medicines and that is especially for the antibiotics but mostly we use locally manufactured medicines and it works for our patients…”

(Doctor, Clinic at Airport Residential Area)

In other high class socio economic areas, the doctors mostly prescribed branded drugs as they believed they were more efficacious.

“…The doctors prefer the branded medicines because they trust them and do not want incidents of resistance or further infections from taking the generic ones…”

(Pharmacist, Hospital at East Legon, Adjiringanor)

Also, doctors prescribed medicines for patients with regard to where they placed on the socio-economic ladder and whether patients were using the national health insurance card or not. At private hospitals where both national health insurance and private health insurance is used, doctors have been known to prescribe medicines based on the kind of insurance presented. Generics for National Health holders and Branded medicines and more expensive branded generics products for middle and upper class households. This must also be because the National Health Scheme has an essential medicines price list which allows for only generics and branded generics to be sold.

“…As for the medicines that are prescribed, they mostly depend on the doctors and what is prescribed the doctors is mostly dependent on the type of insurance that the person is using, we accept different kinds of insurance here so depending on the kind of insurance that you are using, the doctors prescribe the particular brand for you. The ones with the more expensive insurance get the branded medicines and those on the National Health Insurance get the generic medicines mostly…”

(Pharmacist, Hospital at East Legon)

Medicines used by households in different socio-economic categories thus vary with upper class households and some middle class families opting for more expensive brands whilst lower class families and some middle socio-economic categories opt for cheaper alternatives.

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4 The national health insurance scheme was started by the Ghana Government in 2003 to provide quality and affordable healthcare for all Ghanaian citizens.
4.9 Sources of Knowledge of Medicines

Household members had their knowledge of medicines from a myriad of places which include repeating dosages from the hospital, recommendations from friends as well as advertisements. Mothers usually repeated medicines bought from the hospitals if they did not think that the illnesses were “serious” enough.

“… For his cough, I gave him Flemex® Cough syrup and then Amoksiclav® Suspension and later Piriton®. This is because most of the time when we go to the clinic, I go to a Clinic around Airport. That is what he (referring to doctor) prescribes most of time…”

(Akpene, Upper Class Respondent)

In fact, the title of this thesis “I am now a doctor” indicates the level of confidence members of households had about their knowledge regarding medicines. On a visit to one of the families to collect data on medicines consumed over a fifteen (15) day period, the mother the researcher was working with had a visitor who was fascinated with the information the researcher was collecting so she enquired from the mother what the researcher was interested in. The mother told the visitor information was being collected on medicines that had been used by families as well as where they were acquired. The visitor burst out in laughter claiming “I am now a doctor, I know all the medicines”. The mother the researcher was interviewing shook her head vigorously in agreement and went ahead to say her doctor usually repeat the same medicines with common ailments such as cold and malaria and as such when the children have similar conditions, she gets the medicines and gives it to the children as well as herself. They both went ahead to list medicines that are used for the treatment of cold, cough and malaria.

This was very striking because for these women and for the other mothers the researcher interacted with over the period of the fieldwork, the intention of getting medicines to treat themselves was not to circumvent the role of the doctor. It was just something that was done
without a second thought. A means to an end. An easier way to get better without going through the stress of joining long queues or even going through the trouble of visiting the health centre.

4.9.1 Advertisements

Advertisements played a major role in the kind of medicines that were requested for at Pharmacy shops and chemicals shops. This was more evident with regard to herbal medicines which are heavily marketed on radio which is the most widely circulated medium in Ghana.

“…As for the herbal medicines, we stock based on demand because that is what they have heard about on the radio and they want to try it. If we bring others which are not popular, they do not buy it…”

(Paul, Medicines Counter Assistant, Stepps Pharmacy).

Most mothers and members of households admitted to buying medicines based on advertisements they heard on radio or T.V. One of the most popular antimalarials that households used was “Lonart®” and most households referred to an advert which was very popular on T.V which shows how malaria was “sentenced” to prison when it was arrested.

The catchy tune of the advert was very popular among children and adults alike.

“Even if no one tells you, you will see it, if you watch T.V, you learn something from it. When you are watching the T.V and they show that this thing has killed this thing or that thing, it is a mosquito whatever, eh herh. The T.V too we watch to learn something so all of these things, that is where I learnt about the Lonart from”.

(Susanna, Low Class Respondent).

“Hmmm. For the Efpac dierr let me just say because it is a medicine that you could watch... like when you watch TV you see that they will be doing for the adverts and all those things and they say it is for painkilling...”

(Laurie, Middle Class Respondent).

Some T.V adverts as well were educational and advised mothers and caregivers on what to do during specific illness episodes.
“...We have been taught how it should be given to children on T.V. So if a child keeps going to the toilet, the first thing that you are supposed to do, we have been taught. You would look for the Zinc Tablets. If you do not see any improvements, then you take the child to the hospital. The adverts are very helpful. As for that one, it helps. It helps a lot because sometimes they speak English, sometimes Huasa, Fante, Twi so anyone that comes ... If English comes and you don't understand, next time if the advert is about being shown, since you have seen it before but you did not know what was being spoken about, the next time you see the same advert with the same people and the language has changed to Twi, as for the Twi you understand so you will pay attention to it. So whatever the case may be, the language you understand would be used and that is very good. It helps a lot. So I feel that as for the knowledge it is a lot out there to acquire…”

(Ophelia, Middle Class Respondent)

4.10 Determinants of Health Care Options: “Where Do I Go?”

Once the decision is made that a health care centre must be consulted, there were many factors that influences which health facility a household may choose to visit. Habtom and Ruys, 2007 identified four main factors that influenced the choice of a care facility in Eritrea as perceived quality of healthcare, perceived severity of illness, cost involved and proximity. This resonated with data collected in Accra as well.

The factors that affected the choice of a health care facility in most cases was the severity of the illness. In this case, proximity was the first factor that was considered especially if it was perceived that one needed urgent care. For example, for one of the households, the hospital closest was the SSNIT hospital but they visited the Korle-Bu Teaching Hospital because a household member worked there. However when one child fell in the bathroom and sustained injuries, the child was rushed to the SSNIT Hospital which was the closest.

When the discomfort is serious, the hospital was also resorted to immediately. The observation with regard to emergency situations was that care was sought at the nearest health facility however if it was not urgent but a recurring illness, the amount of time that was perceived to be spent at a facility was a major determinant that influenced where households
visited. If the mother anticipates spending more than three hours at the facility the mother would try some medicines at home first.

“...When malaria affects them, I normally send them to the hospital, but looking at what we experienced that night, going to the hospital to sit and wait for the doctor to come and examine you, and to write out test for you to go carry out...sometimes some of the tests, after carrying them out, you don't get the results that very day. You can be told to go and come the next day meanwhile, the child isn't feeling well. So as for me I feel that it's a waste of time. If I know the drug I can buy for the child or know a pharmacist who can give me drugs to give to the child, it's not necessary for me to go and waste that much time at the hospital…”

(Rita, Middle Class Respondent).

For most upper class households that were enrolled onto the private health insurances, health facilities where their insurance operated was where they usually visited. For middle and lower class households, it was observed that because of the long queues at the public hospitals, households usually leaned towards private health facilities which operated the National Health Insurance Service.

The reputation and service of care at a health facility also greatly influenced where households sought care. In this case, distance was not a barrier.

“...My wife attended Police Hospital from Madina for all her pregnancies. The hospital's maternal mortalities is very low, almost non-existent. My wife delivered naturally but at the private hospitals they would convince the women to opt for Caesarean section to reduce labour pains. Then you would pay anything between 2500 and 3500 Ghana cedis…”

(Michael, Middle Class Respondent)

“I like to go to the Madina Polyclinic because that place is close and also there are not a lot of people there”.

(Favour, Middle Class Respondent)

“... At times when you go to the public hospitals, they will tell you the doctors are not around so you have to wait, they would tell you that go and come tomorrow. At times you would go there in the morning. You would sit there, waste all your time there but at the end of the day they would tell you there is no doctor. That is why I decided to change to the private clinic. As for that place, when you go, there are doctors are there. When you go, they would see you…”

(Doris, Lower Class Respondent)
Financial resources did not play a major role in which therapeutic itinerary households decided to consult first. This was because almost all household members were on some form of health insurance whether public or private. It was however the severity of the illness and the time that was anticipated to be spent at the hospital that made households choose go to one health care centre or the other or choose one therapeutic itinerary over the other.

The major determinants of where households chose to visit if there was no urgency was mainly dependent on time anticipated to be spent at facility, financial resources, reputation of facility and proximity.

4.11 Health Care Facilities in Accra

Twumasi (1979) and Senah (1997) have shown that in Ghana, a plural medical system exits. Thus healthcare in Ghana, is provided through a complex network of formal and informal health facilities and personnel in both biomedicine and traditional healing practices which may include shrines, healing homes, spiritual churches, clinics, health posts, pharmacies, herbalists, maternity homes. Some legal and others illegal.

In this study however, biomedical health facilities were the most visited. This must also be because a lot of health facilities are located in the urban areas. Public hospitals, public polyclinics, private clinics were the most patronized by households over the course of the study. One household visited a health centre and another, a maternity home but that was only because they had to access post-natal care and this was not offered at the hospitals they frequented. Herbal medicines though popular in literature was not a popular choice of care.

Gyasi (2014) indicates that there is a high prevalence of utilization of traditional therapies in the Ashanti region. The study reports nearly 72% of respondents applying traditional medicine therapies themselves. This was however not the case in Accra. This must be because of the nature of Accra as well as the lack of the appropriate herbs and shrubs to prepare such herbal remedies. This is because in Gyasi’s study, most of the herbs and other
substances respondents used were obtained from backyards or neighbourhood farms around the community. Other sources included pharmacy and chemical shops, drug peddlars and open markets.

Some household members have also known certain individuals who used herbal medicines that did not end well so were not inclined towards it.

“… One of my cousins bought some herbal medicine and drank it and died so as for herbal medicine. No. Hmmm, she said her stomach. Sometimes her stomach aches so she went to work and when she was coming home, they were selling medicine in a car and she approached them and told them about her stomach problem so they told her that the medicine was for stomach pain so if you drink it, if you have stomach constipation and drink it, you would “run” and be free. So she bought the medicine and came home, she was told how she was supposed to take the medicine. Maybe in the morning you would take 2 spoons and all that. So when she came to drink it, the following day, her stomach became even more serious and she was rushed to the hospital. So in trying to find out what was wrong with her, they said she had taken a certain medicine which did not agree with her system so they were asked to go and bring the medicine. So when they took it, they were told that the medicine was not good and there is something inside that was very strong. So it was the medicine that made that happen and she died…”

(Favour, Middle Class Respondent)

Some others did not like herbal medicines because it was too bitter and it was too much trouble preparing it.

“… As for me I am not able to drink it especially cooked herbs. When I smell the scent, I don't like it so I am not able to drink it. So as for that one, I don't drink some…”

(Mavis, Lower Class Respondent)

One household however bought medicines from a traditional herbs woman who could mix various mixtures for different cures. The mother of that household explained that after she delivered her first child, she kept getting sick so the woman mixed the herbs for her and it served her very well. She indicated her preference for herbal preparations.
When you give birth, they say because of the sores and other things… the herbal medicine is good... It made me get a lot of blood. Even with me, normally, the herbal medicine is good for me that those other ones (referring to synthetic medicines).

(Lara, Middle Class Respondent)

Neo-traditional medicines which has been bottled were however somewhat popular especially for malaria treatment. There were two (2) households who were both in the upper class category who had however used the services of bonesetters for sprains.

One mother indicated in an interview that she had visited a herbal hospital prior to the data collection in the hope that she would be cured of a fibroid without a surgery but she later realised that it was not true.

“I have fibroid... i didn't want to go for the surgery. So a friend told me that if I go there and I am given medicines, the thing would melt. That is what they were saying but is it a lie”.

(Patricia, Middle Class Respondent)

All Upper Class households visited private health facilities or quasi private health facilities like the SSNIT Hospital, one household had a household doctor who did house visits.

One household introduced a quasi-spiritual herbal centre to a friend who was sick. The friend eventually died. In an interview with the owner of the place, he indicated that the patient did not follow through with medications. The household visited the quasi spiritual herbal centre during the period of the research but for spiritual empowerment and not health related issues.

Below is a table showing the various kinds of health care facilities visited by households based on different socio-economic strategies with the exception of pharmacies and chemical shops.
Table 4.7: Health Care Centres Visited by Households

<table>
<thead>
<tr>
<th>Socio-Economic Category</th>
<th>Public Hospitals/Polyclinics</th>
<th>Private Hospitals/Clinics</th>
<th>Maternity Home/Health Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Class Socio-Economic Category</td>
<td>Korle-bu Teaching Hospital, SNNIT Hospital, Police Hospital, 37 Military Hospital</td>
<td>Ghana-Canada Medical Centre, St. Luke’s Clinic, Ababio Clinic, Dziram Eye Clinic</td>
<td>Adjiringanor Health Centre</td>
</tr>
<tr>
<td>Middle Class Socio-Economic Category</td>
<td>Madina Polyclinic, 37 Military Hospital</td>
<td>Effan Victory Clinic, Aton Memorial Clinic, Twumasiwaa Memorial Clinic</td>
<td></td>
</tr>
<tr>
<td>Lower Class Socio-Economic Category</td>
<td>Madina Polyclinic, Alpha Hospital</td>
<td>Aton Memorial Clinic, Dela Clinic</td>
<td>Mrs. Djan Maternity Home</td>
</tr>
</tbody>
</table>

Source: Fieldwork, 2016

As evidenced from the table above, households in the upper class socio-economic category frequented more expensive private health care options. However, some public health facilities were frequented by all families and this must be because of its size and the services that are offered which might not have been available at the private health facility.

4.12 “Who Pays For What?”: Health Care Costs Among Households

To ascertain how much was spent on medicines and who paid for the healthcare costs, the researcher asked for the price of medicines and health care costs as well as who was paying for them. A lot of medicines were bought in addition to others and as such, it was difficult to recall individual prices. Additionally, the researcher did not always meet the household member who purchased the medicines and as such could not get the prices of medicines in a
lot of cases. The researcher was not necessarily interested in how much the medicines cost but how much was spent on medicines on the average among households but that was almost impossible to ascertain given the pitfalls in the data collected.

An interesting aspect of health care costs the researcher observed however was “who paid for what”. It is interesting to note that the heads of households who were mostly men in this scenario were the ones who bought medicines or provided medicines and paid hospital bills. Many mothers also indicated that they bought medicines from their housekeeping monies given to them by their husbands. In one upper class household, the mother indicated that the housekeeping money was money from both herself and her husband and as such there was no clear delineation as to who was paying for what.

In the three female headed households that were part of the study, the mothers paid for their health care costs sometimes with support from other household members. In all households however, if mothers felt that their children needed medicines immediately, they did so from their incomes without waiting on their husbands as all mothers with the exception of one worked and earned a steady stream of income.

In this chapter, the socio-demographic profile of households has been presented. In addition, common illness and perceptions of ill health, therapeutic itineraries, knowledge of medicines and self-medication has been discussed. Health care facilities visited by households as well as health care costs were looked at.
CHAPTER 5

MEDICINES RETAIL OUTLETS AND SELF MEDICATION

5.0 Medicines Retail Outlets

Medicines retail centres play an important role in providing health care to people. In Ghana, there are two types of retail medicines shops. Pharmacies and Licensed Chemical sellers\(^5\). Pharmacies are authorized to sell all three classes of medicines available in Ghana. That is Class A – being prescription only medicines (POM), Class B – being Pharmacist’s list of medicines (P) i.e. medicines that may be dispensed by a pharmacist without a prescription and Class C – being over-the-counter (OTC) preparations. Licensed chemical sellers (LCS) are however authorized to sell by retail, only over the counter medicines (Class C). These LCS came into being in the post-independence era and they are regulated by Pharmacy Act 489 of 1994. A minimum qualification is Senior High School (SSS) Certificate is needed to operate a licensed chemical shop. With Pharmacies, only a licensed Pharmacist is allowed to operate by law (www.pharmacycouncilghana.org).

Pharmacies and LCS are usually the first port of call for most members of the community who want to acquire medicines. They are at the lowest rung of health care delivery and they are as well the closet point of accessing medicines and health care at relatively affordable prices. In the rural areas, licensed chemical shops are indispensable as pharmacy shops are rare.

\(^5\) The Pharmacy Council of Ghana has recently changed the name from Licensed Chemical Sellers to Over-the-Counter Medicines Sellers (OTCM). The rationale for this change is to highlight that the shops are to sell just over-the-counter medicines. As at the time the study started however, this change has just been effected and most shops had not effected change in the names on their sign posts. For the purpose of this study, they would still be referred to as Licensed Chemical Sellers.
5.1 How “Drugstore” Confuses the Classification of Licensed Chemical Shops and Pharmacies

Drug retail shops are popularly called “drugstores” in Ghana. These “drugstores” may either be Pharmacies or LCS. Most mothers of households did not make a clear distinction between pharmacies and licensed chemical shops although chemical shops are restricted to only the sale of over the counter medicines. Proximity and cost of medicines was the strongest indicator of where households purchased medicines. Below is an excerpt of an interview with a mother.

“Researcher: Talking to you, i have noticed that sometimes you say drugstore, other times too you say Pharmacy.

Susanna: Hmmm, it is amazing...

Researcher: But do you know any differences between the Pharmacy and the drugstore?

Susanna: Hmmm. The Pharmaceutical are the ones who produce the medicines or am i lying? And the drugstores are the ones who sell to us. If it is not the same then i have to look for the meaning.

Researcher: Please what did you say the Pharmacy does?

Susanna: Something like Tobinco Pharmacy... Pharmaceuticals. They are the ones who manufacture the medicines and bring it out.

Researcher: Hmmm

Susanna: And then the small ones, the drugstores will also take it and then we go and buy it from them.

Researcher: Hmmm. So with that, do you any difference?

Susanna: With me, the difference i see is that if they say that something is Pharmaceuticals, then it is huge.

Researcher: I am not referring to Pharmaceuticals, i am talking about a Pharmacy.

Susanna: Pharmacy... as for Pharmacy i see it to be someone who sells different types of medicines. That is how i see it.

Researcher: And what about chemical shop?
Susanna: That is how i see that one too as well. If there is any difference, i don’t really know”

(Excerpt of interview with Susanna, A Lower Class Respondent).

Most mothers did not know the clear cut differences between pharmacies and chemical shops and it cuts across all the socio-economic classes. For those who knew the differences, they said it was more preferable to go to the pharmacy as there were “doctors” there however this was not the reality in practice. Proximity and cost were the major influencers driving people to one place or the other.

“… Mmmhm, as for pharmacy, I know that it is medicines that are sold there, drug store too is same so as for me, i know that they are both the same…”
(Mavis, Lower Class Respondent)

“…At the pharmacy sometimes when you go sometimes a proper doctor, a medical doctor is the one taking care of the place but as for the chemical shop anybody like someone may not have any training. The most important thing is to get a license to sell the drugs. That is what I know…”
(Favour, Middle Class Respondent)

“… The chemical shop, the chemist, the thing is they are not allowed to sell certain drugs because i mean the chemist, well if I am right the chemist, the chemist necessarily doesn't have to be Pharmacist. If I am right and for the Pharmacy shop, they are permitted to sell all kinds of drugs and the can... and they also have the knowledge to advise you so i would rather go to the Pharmacist…”
(Safia, Upper Class Respondent)

5.2 How Medicines Are Purchased

Interviews with LCS and pharmacists indicate that direct demand is the commonest way or means by which clients purchase medicines. Some customers mentioned the colours of medicine to indicate what they wanted. Red and yellow for instance meant Amoxicillin capsule. Direct demand also include names of medicines written on papers, showing old medicines package or empty boxes to indicate what they want. Others sought advice by presenting their symptoms and expect the chemical seller or pharmacist to help with a
mediation. This is followed by request for advice from the chemical seller or pharmacist and then very rarely prescriptions from doctors.

5.3 Socio-Economic Classes And Where Medicines Are Obtained

There were a number of drug retail outlets where members of households could buy medicines. These include both formal and informal drug retail outlets. Most households obtained medicines from formal places such as hospitals, polyclinics and clinic dispensaries, pharmacies, licensed chemical shops with a few informal purchases from drug peddlers, the open market etc. which constitute informal drug outlets. There were a few times that some household members prepared some herbal preparations on their own. The table below shows where households bought medicines across the three socio-economic classes.

Some other interesting places where households obtained medicines were at health screening exercises which sometimes included blood donations usually organized by churches and some philanthropic organizations. Medicines given out were usually vitamins and blood tonics. Most upper class members had friends and household buying vitamins and various food supplements for them when they travelled abroad and were returning. Some others bought it themselves when they travelled out of the country and were returning.
Table 5.1: Socio-Economic Classes and Where Medicines Are Obtained

<table>
<thead>
<tr>
<th></th>
<th>Socio-Economic Class</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Class</td>
<td>Middle Class</td>
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<tr>
<td><strong>Pharmacy</strong></td>
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<tr>
<td>Count</td>
<td>22</td>
<td>55</td>
</tr>
<tr>
<td>% of Where medicines were bought</td>
<td>8.50%</td>
<td>21.20%</td>
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<tr>
<td>% within Socio-Economic Class</td>
<td>13.50%</td>
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<tr>
<td>% of Total</td>
<td>3.70%</td>
<td>9.40%</td>
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<tr>
<td><strong>Chemical Seller</strong></td>
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<td>Count</td>
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<td>36</td>
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<tr>
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<tr>
<td>% within Socio-Economic Class</td>
<td>43.60%</td>
<td>26.90%</td>
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<tr>
<td>% of Total</td>
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<td>6.10%</td>
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<tr>
<td><strong>Clinic</strong></td>
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<td></td>
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<tr>
<td>Count</td>
<td>35</td>
<td>10</td>
</tr>
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<td>% of Where medicines were bought</td>
<td>42.20%</td>
<td>12.00%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>21.50%</td>
<td>7.50%</td>
</tr>
<tr>
<td>% of Total</td>
<td>6.00%</td>
<td>1.70%</td>
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<tr>
<td><strong>Outside the country</strong></td>
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<td></td>
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<tr>
<td>Count</td>
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<tr>
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<td>3.00%</td>
</tr>
<tr>
<td>% of Total</td>
<td>0.00%</td>
<td>0.70%</td>
</tr>
<tr>
<td><strong>Hospital</strong></td>
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<td></td>
</tr>
<tr>
<td>Count</td>
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</tr>
<tr>
<td>% of Where medicines were bought</td>
<td>60.00%</td>
<td>20.00%</td>
</tr>
<tr>
<td>% within Socio-Economic Class</td>
<td>9.20%</td>
<td>3.70%</td>
</tr>
<tr>
<td>% of Total</td>
<td>2.60%</td>
<td>0.90%</td>
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<tr>
<td><strong>Polyclinic</strong></td>
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<td>Count</td>
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<td>12</td>
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<td>% of Total</td>
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<tr>
<td><strong>Health Screening</strong></td>
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<td></td>
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<tr>
<td>Count</td>
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<td>4</td>
</tr>
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<td>% of Where medicines were bought</td>
<td>42.90%</td>
<td>57.10%</td>
</tr>
<tr>
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<td>1.80%</td>
<td>3.00%</td>
</tr>
<tr>
<td>% of Total</td>
<td>0.50%</td>
<td>0.70%</td>
</tr>
<tr>
<td><strong>Prepared at Home</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Count</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>% of Where medicines were bought</td>
<td>57.10%</td>
<td>42.90%</td>
</tr>
</tbody>
</table>

University of Ghana http://ugspace.ug.edu.gh
As evidenced in the table above, most households in the low socio-economic class category preferred to buy medicines from chemical shops because they offered relatively cheaper price alternatives. Not only is the medicine prices more affordable as compared to those in pharmacies, there are other “services” that clients receive from chemical shop attendants. It includes readiness to give medicines in smaller quantities according to customers’ demand even if it falls short of the complete dosage. For example some chemical shop attendants were prepared and sold out two (2) or three (3) capsules of antibiotics or single blisters of antibiotics based on the client’s demand. The chemical shops owners “understood” their
clients and their “pockets” and were willing to give them medicines to suit how much they could afford.

“…The reason why we all like medicines from Uncle T’s place (chemical shop) is that, when you go to the Children’s hospital and they prescribe Paracetamol for you, they can sell it to you around 10 cedis. If you come to Uncle T’s place the same medicine would be 5 cedis. So you see the big difference? So when they give it to me (prescription), I don’t even venture trying to get it from there at all. That is the fact!...

(Susanna, Accra Newtown, Accra, Middle Socio- Economic Class).

Some customers also have very strong allegiance to places where they buy their medicines because their owners gave medicines out on credit. Whilst this practice was very popular with chemical shops, only one pharmacy had this arrangement with customers.

“… They say his medicines have spoilt because he uses a fan but that is where I go. He is the one who gives me medicine when I don’t have money. When I go there to explain to him that my baby is sick so he should help me, he does then when I get money, I pay back….”

(Rabiatu – Lower Class Respondent)

“…We have two special customers who are allowed to buy drugs on credit and we sometimes supply to them…”

(Medicines Counter Assistant, East Legon).

All upper class households studied for the period acquired medicines from pharmacies. None of them bought from Chemical Shops. This must be because chemical shops were not very visible in the neighborhoods. This is particularly true for Cantonments/Labone. In East Legon, only one chemical shop was found. The case was however different for middle and low class socio-economic categories. A chemical shop was almost always within about a 100 kilometres from each other as stipulated by the law. This was interspersed with Pharmacies and people bought medicines from places close to them, be it Pharmacy or chemical shop. One out of sixteen households sometimes bought medicines from a Polyclinic nearby without
going to see a doctor. The middle class bought from both pharmacies and chemical shops and once again proximity was a factor.

Households categorized under the lower class bracket frequented chemical shops the most. This must also be because licensed chemical shops abounded in these areas. Pharmacies were also interspersed in these areas and they visited pharmacies when they perceived that they would not get the medicines from chemical shops.

5.4 How Medicines Retail Centers Influence Self-Medication

Pharmacies and Chemical shops though on the lowest rung of the health care delivery system offer very important services to members of the community. They are usually the first port of call for most members of the community as it is the closet point in most places where medicines can be accessed and at cheap prices too. These medicines retail centres are also the preferred places for most people because of long queues at hospitals. A mother shows how important chemical shops are in an interview.

“... i remember, there was a time i sent Princess to the hospital, I gave her the medicines which were given me, but still, she did not feel better...at the end of it all, I went with her again to the drugstore to buy medicine for her before she got better, so I don't depend on hospitals most of the time... he (referring to attendant of chemical shop) is really knowledgeable about medicines”
(Ophelia, Middle Class Respondent)

The encounters between attendants of medicines retail centres and customers when pharmaceuticals are being purchased show how important they are and crystallize their role as caregivers in the community. Pharmacists and LCS owners/ attendants were very warm and respectful towards their clients. At the licensed chemical shops especially during the interviews, the researcher noted that there was a lot of playful banter and the conversations sometimes went beyond the immediate purpose of acquiring medicines to inquiring about other members of the household.
Members of the community also appreciate the effort of these attendants of these chemical shops. Most community members hail them as doctors and one pharmacy shop attendant aptly describes his experience where a woman he had prescribed medicines for told him “woy3 me doctor” meaning “you are my doctor” due to the fast nature of her recovery after she had taken the medication. This is in tune with Logan’s study in Mexico where people routinely consulted the local pharmacist almost like a doctor (1988, p. 107). She adds that locals presented their physical complaints and described their symptoms, expecting the pharmacists to diagnose their ailments and to prescribe treatment.

Owners of pharmacies and chemical shops are held in high repute by members of the community. They are seen to be vessels of knowledge who have had a long illustrious career and the community members repose a lot of trust in them.

Some of these attendants were full of praise for themselves. Touting their own credentials which was usually based on experience acquired whilst selling medicines for a long time and not from having had formal training.

“I am very competent in drugs. There is no hospital I can’t handle” (Chemical seller, Madina).

This reverberates with findings from Hughes (2012) among medicines sellers in North West Cameroon where they saw themselves as providing a cheaper service as well as having advantages for clients in terms of geographical proximity and extended and flexible opening hours. The study however points out that medicine sellers presented themselves as complementary to the formal sector, rather than in competition and this is also evident in this study where chemical shop attendants would most often refer a customer to go the hospital if they were not getting better.

The high purchase of medicines from chemical shops and pharmacies (62.3%) indicates the high levels of self-medication among households. In most cases, when households visited the
hospital all medicines were acquired from the hospital pharmacy therefore all medicines that were purchased from drug retail centres as presented in this study were bought by household members themselves or based on knowledge of previous prescription or advice from friends. This also agrees with literature from Van den Boom (2004) which showed that self-medication is a predominant form of curative care in Ghana. In the literature, self-medication accounted for more than 50% of curative care. This was more prevalent among the poor and this was attributed to the out-of-pocket payments for health care delivery which existed at the time. With the introduction of the national health insurance scheme which more than half of the households the researcher was studying had subscribed to, it is apparent that self-medication is more of a choice than a matter of financial constraints. It is apparent that a lot of people utilize LCS and pharmacies in seeking health care.

5.5 Disconnect Between Policy and Practice at Medicines Retail Centres

The researcher observed at the various chemical shops during interviews that the services provided by LCS’s exceed widely what is stipulated by law i.e. retail of only over-the-counter medicines (Class C) and those included in the national public health programs (antimalarial, contraceptives, etc).

The sale of antibiotics, which is a prescription only medicine with the exception of Clotrimazole was sold in all 4 shops. Most LCS sold other prescription drugs such as antihypertensives, antidiabetics, antixylotics, anti-asthma and injections. The reason given by some of the owners of these chemical shops was that they are the nearest places people can access medicines and as such they must have medicines that their customers want in order to retain their customers. Others explained that they stocked based on demand.

The law stipulates that the holder of the license must be the one to operate the shop. This was however not the case in some places. Two out of the four LCS studied were using certificates
of others to operate. These LCS operators paid to buy the license to operate as they had had difficulty obtaining a license from the Pharmacy Council. Some male operators used the names of their wives or female household members to obtain the license as there is the belief that it was easier for females to get the licenses as opposed to males. One male operator explained that the pharmacy council realised that when the men secure the licenses, they do not usually manage the shops but leave it to their wives to manage whilst the men go about doing other activities. He further explained that the pharmacy council thus makes it a lot more difficult for the men than the women since the council believes that the women actually stayed in the shops to manage them as opposed to the men. Owners of two chemical shops had pharmacy shops at Okaishie and opened chemical shops in crowded areas. They hired medicines counter assistants to manage the shop who they paid at the end of the month whilst they went about their other businesses.

According to the regulation of the Pharmacy council, operators are taken through some form of training and orientation after they had been granted the license. The researcher also noticed that some shops are manned by attendants without formal training but happen to be children and other relatives of the owners who have learnt how to “retail” on the job.

According to the Pharmacies Registration and Application Guidelines, all pharmacies should be supervised by registered Pharmacists in good standing with the Pharmacy Council (www.pharmacycouncilghana.org). Most of the pharmacists have the training but invariably do not stay at the shops. In two pharmacies, there was no pharmacist during at time of visit. Some pharmacies also had more than one branch however they had just one pharmacist who rotated in between these shops. Most attendants at pharmacies were medicines counter assistants and had had 6 months training from a medicines counter training school. Their training usually spanned about a year within which the students were attached to hospitals.

Okaishie is a huge central pharmaceutical wholesale point in Accra which houses several pharmaceutical wholesale and retail shops.
and pharmacies. These individuals are mostly retained by the pharmacies at the end of their internships.

In interviews with pharmacists, the emphasis that experience was more important in the dispensing business is interesting to note. This is in tandem with findings from the work of Kamat & Nichter (1998) where many pharmacy managers argued that it is not necessary for a qualified pharmacist to manage a pharmacy. In their opinion, because of the way the medicines are packaged to be sold, experience was more important than a formal degree.

5.6 Prescriptions: Theory and Practice

During the bi-monthly monitoring, it was noted that most household members did not follow through with prescription or had their own dosages, deviating from the instructions that has been given to them. During one of the monitoring sessions, the researcher noticed that one mother was not going according to the dosages that had been indicated by the doctor.

“…I take one each day but it is supposed to be two capsules, 2 times daily…”  
(Rabiatu, Bi-monthly monitoring –Lower Class Respondent)

Granny Mary, a grandmother in one of the households also indicated that she used her discretion to take her vitamins.

“It is supposed to be one tab (referring to Vitamin B, two times daily but I usually take it just in the mornings.  
(Granny Mary, Bi-monthly monitoring- Upper Class Respondent)

This was not present in only low socio-economic class categories but in all other socio-economic classes as well. Most members of households just stopped taking medications when start to feel better. This is in consonance with literature from Homedes and Ugalde (1993) show that generally, individuals have low levels of adherence to medical dosages because people tend to forget the details of the advice given, or fail to purchase all the drugs that are prescribed, because they lack the financial means to do so. Patients sometimes stop taking the prescribed drugs or take the wrong dosage.
For most of the households the researcher studied, it was not a matter of financial constraints. Most households did not just have the discipline to complete full dosages. When they realise they are getting better, they stop taking their medications saying that they do not like medicines but only take it out of necessity thus the moment they felt better, they did not see the need to continue with the course.

This is very problematic especially with antibiotics and antimalarials. It is not surprising to find out that resistance thresholds to these therapeutic classes continue to rise in Ghana and the world at large (Kunin et. al, 1987, Donkor et al. 2012).
CHAPTER 6

MALARIA IN FOCUS

6.0 Malaria

Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female *Anopheles* mosquitoes. In 2015, 95 countries and territories had ongoing malaria transmission. About 3.2 billion people, almost half of the world’s population are at risk of malaria (WHO, 2015). Malaria is however preventable and curable, and increased efforts are dramatically reducing the malaria burden in many places.

Between 2000 and 2015, malaria incidence among populations at risk fell by 37% globally. In that same period, malaria death rates among populations at risk fell by 60% globally among all age groups, and by 65% among children under 5 (WHO, 2015). According to the latest WHO estimates, released in December 2015, there were 214 million cases of malaria in 2015 and 438 000 deaths. An estimated 6.2 million malaria deaths have been averted globally since 2001.

Sub-Saharan Africa carries a disproportionately high share of the global malaria burden. In 2015, the region was home to 88% of malaria cases and 90% of malaria deaths. In 2015, approximately 3.2 billion people – nearly half of the world's population – were at risk of malaria. Most malaria cases and deaths occur in sub-Saharan Africa. However, Asia, Latin America, and, to a lesser extent, the Middle East, are also at risk. In 2015, 95 countries and territories had ongoing malaria transmission.

Some population groups are at considerably higher risk of contracting malaria, and developing severe disease, than others. These include infants, children under 5 years of age,
pregnant women and patients with HIV/AIDS, as well as non-immune migrants, mobile populations and travelers.

In Ghana, Malaria is hyper-endemic and constitutes one of the leading causes of morbidity and mortality, especially among pregnant women and children under the age of five. The Ministry of Health (MOH) estimates that 3 to 3.5 million cases of suspected malaria are reported each year in public health facilities, representing 30-40 percent of outpatient attendance (Ghana Demographic and Health Survey, 2008). Of this figure, over 900,000 are children under the age of five. Malaria also accounts for about 61 percent of hospital admissions of children under five years and 8 percent of admissions of pregnant women. It is estimated that malaria accounts for 22 percent of under-five mortality and 9 percent of maternal deaths (The President’s Malaria Initiative, 2007).

**Transmission**

Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female *Anopheles* mosquitoes, called "malaria vectors." There are 5 parasite species that cause malaria in humans, and 2 of these species – *P. falciparum* and *P. vivax* – pose the greatest threat. *P. falciparum* is the most prevalent malaria parasite on the African continent. It is responsible for most malaria-related deaths globally. *P. vivax* is the dominant malaria parasite in most countries outside of sub-Saharan Africa. In most cases, malaria is transmitted through the bites of female *Anopheles* mosquitoes. All of the important vector species bite between dusk and dawn. The intensity of transmission depends on factors related to the parasite, the vector, the human host, and the environment.

*Anopheles* mosquitoes lay their eggs in water, which hatch into larvae, eventually emerging as adult mosquitoes. The female mosquitoes seek a blood meal to nurture their eggs. Each species of *Anopheles* mosquito has its own preferred aquatic habitat; for example, some prefer small, shallow collections of fresh water, such as puddles and hoof prints, which are abundant during the rainy season in tropical countries.
Transmission is more intense in places where the mosquito lifespan is longer (so that the parasite has time to complete its development inside the mosquito) and where it prefers to bite humans rather than other animals. The long lifespan and strong human-biting habit of the African vector species is the main reason why nearly 90% of the world's malaria cases are in Africa.

Transmission also depends on climatic conditions that may affect the number and survival of mosquitoes, such as rainfall patterns, temperature and humidity. In many places, transmission is seasonal, with the peak during and just after the rainy season.

**Symptoms**

Malaria is an acute febrile illness. In a non-immune individual, symptoms appear 7 days or more (usually 10–15 days) after the infective mosquito bite. The first symptoms; fever, headache, chills and vomiting may be mild and difficult to recognize as malaria. If not treated within 24 hours, *P. falciparum* malaria can progress to severe illness, often leading to death. Children with severe malaria frequently develop one or more of the following symptoms: severe anaemia, respiratory distress in relation to metabolic acidosis, or cerebral malaria. In adults, multi-organ involvement is also frequent. In malaria endemic areas, people may develop partial immunity, allowing asymptomatic infections to occur.

**Prevention**

Vector control is the main way to prevent and reduce malaria transmission. Thus Insecticide-treated mosquito nets (ITNs) is the preferred form of prevention. Indoor spraying with insecticides is also a powerful way to reduce malaria transmission. Antimalarial medicines can also be used to prevent malaria. For travellers, malaria can be prevented through chemoprophylaxis, which suppresses the blood stage of malaria infections, thereby preventing malaria disease. For pregnant women living in moderate-to-high transmission areas, WHO recommends intermittent preventive treatment with sulfadoxine-pyrimethamine,
at each scheduled antenatal visit after the first trimester. Similarly, for infants living in high-transmission areas of Africa, 3 doses of intermittent preventive treatment with sulfadoxine-pyrimethamine are recommended, delivered alongside routine vaccinations.

**Antimalarial Drug Resistance**

Resistance to antimalarial medicines is a recurring problem. Resistance of *P. falciparum* to previous generations of medicines, such as chloroquine and sulfadoxine-pyrimethamine (SP), became widespread in the 1970s and 1980s, undermining malaria control efforts and reversing gains in child survival.

WHO recommends the routine monitoring of antimalarial drug resistance, and supports countries to strengthen their efforts in this important area of work.

An ACT contains both the drug artemisinin and a partner drug. In recent years, parasite resistance to artemisinins has been detected in 5 countries of the Greater Mekong subregion: Cambodia, Lao People’s Democratic Republic, Myanmar, Thailand and Viet Nam. Studies have confirmed that artemisinin resistance has emerged independently in many areas of this sub region. Most patients are cured when treated with an ACT if there is no resistance to the partner drug.

However, in parts of Cambodia and Thailand, *P. falciparum* resistance to both artemisinin and partner drugs (multi-drug resistance) has developed. There are concerns that *P. falciparum* malaria in Cambodia and Thailand is becoming increasingly difficult to treat, and that multi-drug resistance could spread to other regions with dire public health consequences.

**6.1 Perceived Causes of Malaria**

All mothers were aware that Malaria was caused by mosquitoes. They mentioned other factors as well such as stagnant water, weedy areas and uncovered water. For some others, being in the sun for too long at time could cause Malaria.
Fever is brought about by sunshine. When the sun shines like that, and mosquito bites someone that increases Fever. Mosquitoes bring Fever but the main cause of Fever is Sunshine and the mosquitoes add the malaria.
(Gladys, Lower Class Respondent)

“…It is mosquitoes. When you sit outside for long, sometimes when the lights go off, we sleep outside a lot. Sometimes by the time you wake up, you can have about 4 “mosquito bites on your cheek…”
(Rabiatu, Lower Class Respondent)

“…Yeah, the mosquitoes, and sometimes the food we eat which we don't cover up, and insects...a whole lot. Also when you store water....when you store water and you don't cover it, and the place becomes dark, mosquitoes will be attracted to the place and they will eventually settle on the water and so I feel like that is what brings about the malaria.
(Ophelia, Middle Class Respondent)

6.2 Perceived Signs and Symptoms of Malaria

Malaria was associated with loss of appetite, change of eye color, feverishness, bitterness in the mouth etc. It was also associated with headaches, high temperatures (locally known as Ahoshew), body pains, tiredness, yellow eyes/urine and vomiting.

“…Me, when my malaria is coming you would see that my mouth would be like I can’t eat, anytime I eat food, it is not sweet in my mouth then I just know it is malaria…”
(Laurie,Middle Class Respondent).

“…When someone has Malaria, the person would be hot and would be shivering as well. Then you know it is Malaria. Sometimes it would appear on the eyes like fever. The top of your eyes would be yellow…”
(Gladys, Lower Class Respondent)

“… When my child is sick of Malaria. It is the eyeball that I use to detect that. The eye is black and white so when the white begins to change then I see that... when you give him food, you see that it is difficult for him to eat. Then I know it is something like that…”
(Susanna, Lower Class Respondent)
6.3 Treatment of Malaria

The first option in most cases when households felt they had Malaria which in most cases was high temperature, the first option was to self-medicate with Artemisinin based combination therapies. ACT combination therapies are very popular with all households. Arthemether Lumefantrine (Green Leaf), Lumether (Green Leaf), Coarterm, Lonart are very popular in treatment against malaria. The second option of visiting health facilities occurred only when self-medication did not work.

This is in agreement with Foster (1995) who noted that the vast majority of malaria cases in both adults and children are treated at home and it is only when the case is very severe or the health services very convenient that it would be likely used for malaria treatment.

“…It does not really worry us. When the Children are hot and they start shivering, then I take them to the drugstore then the drugstore owner would say it is Malaria then they would sell its medicine for me. Then it would stop... (Gladys, Lower Class Respondent).

“…Teedar is also a children's drug which, when they become hot and you give it to them, the hotness subsides...So when I gave him the Teedar and he does not feel better, then I go with him to the pharmacy to buy the malaria medicine for him…” (Ophelia, Middle Class Respondent)

Figure 6.1: Pictures of antimalarials

Source: Fieldwork, November 2015- March 2016
Local Remedies such as boiled neem tree with lemons were observed with two (2) households. Some households also took neo-traditional preparations in the hope to cure themselves of Malaria. Biomedical remedies are however the most popular. ACT’s (Artemether/ Lumefantrine being the most common used), other antimalarial were bought from drug stores and health facilities through health insurance. Decisions made depends on the severity of the symptom on the person, age and closeness to drug outlet.

6.4 Prevention of Malaria

Households had a myriad of ways of preventing malaria. The first was to get some first aid which was usually an antipyretic. Teedar a locally manufactured antipyretic composed of Paracetamol and Diphenhydramine was very popular.

“…when the kids are sick, I start with the Malaria treatment even before I call the doctor because it is like a first aid because for children, if the Malaria is like erm goes to the next stages, it is dangerous so erm yeah. I do that…”
“Safia, Upper Class Socio Economic Activity”

“…when I see that Malaria is about to set in, then very fast I get some Teedar for him. Fast connection. Because I would not wait. Prevention is better than cure so I prevent it from there fast! ...”
(Susanna, Lower Class Respondent)

Households therefore did not wait to be diagnosed of malaria before they started treatment. Immediately they felt they had symptoms of malaria, they prevented it by taking medicines or administering them.

Some households used mosquito nets but they were not very popular. Four out of Sixteen households slept in mosquito nets on a regular bias. Many complained about the stifling heat not encouraging them to use it. Many also used insecticide sprays.

“…They gave us some but when we tie in and we sleep in it, we can’t sleep. It is always hot. We always use the malaria... this thing... spray…”
(Laurie, Middle Class Respondent)
6.5 Antimalarial Use among Different Socio-Economic Classes

Artemisinin Combination Therapies (ACTs) which are the recommended first line for treatment for malaria were widely used by households in all socio-economic categories.

The major difference however lay with the brands of ACT’s that were used. Upper Class households bought more expensive brands whilst most members of the middle class used either branded generics or generics. Artemether/Lumefantrine combinations (ACT) is the most common antimalarial used by households irrespective of their socio-economic status. Households in the upper class categories preferred Coartem® for both adults and children, one household used a combination of PlasmoTrum® and Camoquine® for Children. The middle class category used antimalarials which include Coarterm®, Lonart®, Arthemether Lumefantrine® etc for both adults and children. The lower class used the Green Leaf Arthermeter Lumefantrine which was subsidized by government, Lumether (a variant of the Green leaf and Quinine Syrup for children). Mothers mentioned the use of Sulphadoxine Pyrimethamine for use as well during pregnancy. This was also recorded during the study. Anti-malarial herbal mixtures are also used by some households (2 out of 15 households). Other medicines used for in addition to treatment of Malaria include blood tonics, vitamins this practice is common among all socio-economic classes.

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7 Sulphadoxine Pyrimethamine is administered to pregnant women to prevent malaria in unborn babies.
CHAPTER 7

SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

7.0 Introduction

This study sought to investigate self-medication practices among households of different socio-economic classes in Accra. The study sought to find out if socio-economic factors played a distinct role in the use of medicines among households in Accra. This chapter presents a summary of the entire study, major findings based on the objectives and some recommendations.

7.1 Summary

Medicines have become very accessible, affordable and very common over the years. Medicines are however chemical products and their uncensored used can create problems. It is in this vein that this study was conducted to study the self-medication practices among households and how their socio-economic class influences consumption patterns. The study was conducted in Accra and included East Legon-Adjiringanor, Kotobabi, Cantonments-Labone and Madina to be precise. Participants of the study included 16 households who were purposively selected. Data were collected through the use of semi-structured interviews with mothers and other members of the household, a bi-monthly monitoring of medicine intake for a period of 5 months in addition to visits to selected health care facilities was carried out.

The study lasted for 12 months, however fieldwork covered about 6 months.

Specifically, the study aimed to achieve the following objectives.

1. To ascertain pharmaceutical consumption through self-medication among different socio-economic classes.
2. To find out the various factors that influence the daily uses of medicines

3. To explore the different kinds of health care offers accessed among different socio-economic classes.

4. To identify common illnesses and study the types of pharmaceuticals (antibiotics, antimalarials, herbal, etc) that are used to treat them among households of different socio-economic classes.

5. To explore health care costs among households of different socio-economic classes.

7.2 Major Findings

Ascertaining pharmaceutical consumption through self-medication among different socio-economic classes

Self-medication was very high among all 16 households. For all 587 medications taken among households, more than 60% of the medicine was taken based on self-treatment. Households had a lot of information on what to take based on past prescriptions from hospitals, advice from friends and advertisements. This resonates with literature from Vietnam which shows that more than 40-60% of the households depend on self-medication (Okumura et al., 2002).

The study found out that a person’s socio-economic class did not play a significant role in the therapeutic itinerary of households. The first major course was to take some medicines from the home first aid box or if there were no medicines, to visit a medicine retail centre immediately. This was usually followed by a visit to the hospital if the situation does not see any improvement. Thus obtaining medicines through a doctor’s prescription is rare. Chemical shops and pharmacies are usually the first port of call for most households when they are ill even for those with health insurance. Most households avoid the hospitals and clinics usually because of long queues and time wasting. This is also congruent with findings from Igun
(1987) where individuals consulted retail pharmacies like outpatient clinics because of “efficacy of treatment” and “convenience”.

**Factors that influence the daily uses of medicines and health care choice among different socio-economic classes.**

This objective sought to find out the factors that influences the daily use of medicines and health care among households of different socio-economic classes. The study revealed that there are various reasons why households take medicines. The major reason was when they were ill. However, what was described as ill health was dependent on how “serious” the illness was thought to be and based on this, the appropriate medicine would be sought and if necessary, a health centre would be consulted. These illness were therefore classified by the researcher as “not serious” and “serious” illness. “Not serious” ailments were strongly linked to self-medication. In addition, therapeutic itineraries among households were explored and self-medication was the first care option considered for most ailments. Self-medication thus was mostly carried out to effect a cure. Health care facilities in Accra visited by households were identified to be hospitals, private clinics, polyclinics and maternity homes. One spiritual centre and one traditional medicines seller were also identified as offering health care in Accra. This is in harmony with Senah (1997) where he identifies church based healers, indigenous medical practices and biomedicine operating side by side in the rural town of Bortianor.

**Identifying common illnesses and medicines that are used to treat them among households of different socio-economic classes**

The common illnesses that were identified among households was cold and cough, malaria, skin infections and stomach problems. Most popular medicines used by households are Antipyretics/analgesics, antihypertensives, antibiotics, anti-malarials, and upper respiratory
infection medicines. This finding agrees with work from Donkor et al. (2012) which estimated the prevalence of self-medication with antibiotics at 70%. Vitamins, food supplements, blood tonics and appetite stimulants as well featured prominently. Dewormers and garlic capsules were popular as well.

**Health Care Costs Among households of different socio-economic classes**

Health care costs were usually borne by male heads of the households. In female headed households, they were borne by the mothers with help from other household members. There were differences in health care costs in relation to the type of medicines bought by members of the different socio economic categories.

Upper class socio economic households and some members of the middle class socio economic class categories preferred branded medicines which were more expensive as opposed to cheaper generics which were usually opted for by members of the lower class socio-economic category. This is in agreement with work by Senah (1997) which showed that a person’s expenditure on health was closely related to their earning power.

**7.3 Conclusion**

The findings of this research confirmed work done by other researchers in the reviewed literature. Thus self-medication was very high among households and this was influenced largely by long queues in hospitals and the availability of medicines retail centres. In this study however, socio-economic class did not play a major role in where households visited first when healthcare is sought. The existence of the National Health Insurance Scheme ensured that there was a level ground for access. However, differentials are seen in the medicines purchased and the type of health care facilities visited by members of the different socio economic categories.
This study has revealed that households learn some of the prescribing patterns of doctors and this is a major reason why most households have the confidence to self-medicate. They repeat prescriptions instead of visiting a health facility when they are ill. This behaviour cuts across board for all socio-economic classes.

These findings confirm the theoretical framework on which the foundation of this work was built. That is to say, human beings indeed make “rational” decisions based on the options available to them. Even though almost all families had some form of insurance and therefore did not have to pay for health care costs directly out of their pockets, people often rationalized the time to be spent at the hospital and choose self-care options when they perceive their illness is not serious enough to warrant urgent medical care. They rather use left-over medicines from previous visits to the hospital or repeat their prescriptions.

Also, with regard to the social exchange theory, how households utilized their social capital is instructive to note. Whilst some others had friends who were doctors who made house visits, others bought medicines for their friends as gifts which was eventually reciprocated by those on the receiving end. It is evident that the theories used were relevant for the study.

In as much as a healthy people, are important for national development, medicines are essential for health promotion and national development. However, as poisonous products their consumption needs to be controlled in order to promote national security and development. The issue of self-medication is still a reality which could lead to irrational use of medicines particularly ACT’s.
7.4 Recommendations

Based on the findings of this study, the following are recommended.

- Customer care training should be taken very seriously for staff in government hospitals and care facilities to encourage citizens to visit such facilities. This would greatly decrease self-care practices.

- The waiting time to see a doctor if improved would go a long way in discouraging health care practices. This can be implemented through simple ways such as making appointments options available to clients in government health care facilities as pertains in some private health care facilities.

- Investments must be made by the Ghana Pharmacy Council to effectively monitor the activities of drug retail outlets to ensure that proper standards are adhered to.

- Licensed Chemical sellers should be equipped with the right knowledge by the Ghana Pharmacy Council so that they are able to dispense some prescription only medicines such as antibiotics. The study revealed that a number of chemical shops are rendering this service with a lot of patronage from community members thus it might be proper to sanitize the system by equipping them with the relevant knowledge.

- A lot more investments should be made into public broadcasts by the Ministry of Health, The Ghana Health Service and its related agencies to educate the public on the dangers of resistance due to abuse of medicines.

- Future researchers interested in the study of use of medicines among households should be aware of medicines that maybe used for reproductive health purposes. The researcher should note that if explicit questions are not asked in this regard, some important information might be lost. However, the researcher has to be mindful of the
intrusive and probing nature of such questions and approach it with care taking into consideration, the ethical rights of the participant.
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**WEBSITES**

Accra Metropolitan Area


**NEWSPAPER**

*Daily Graphic* (2015), Medical Stores Fire Disaster, January 15.
APPENDICES

APPENDIX ONE: Interview guide with mothers and other members of the household

Introduction: Good morning, I am a student reading Sociology at the University of Ghana, Legon. I am interested in the health of households and will be asking questions on how your household perceives health, what your household’s health problems are and how your household takes care of its health problems. I am also here to have a conversation with you about issues around the way people in your household take care of their health in terms of the consumption of medicines and the patterns of self-medication and prescribed medicine.

Question to begin: To start, I would want you to tell me the last time each member of your household took medicine (pharmaceuticals, traditional, neo-traditional, Chinese, etc). First, I am going to take the first names of all the members of your household and then you will explain to me the medicine(s) he/she took, what it was for; if it was for a specific disease or it was taken generally to remain healthy, if maybe it was after having seen a doctor or of your own initiative or under the advice of somebody... You will explain to me as well where you took this/these medicine(s) and how you paid for them... Can you explain all this to me? Then we are going to begin by …

1-Medicine uses and the reasons for use

Can you tell me the last medicine taken by …….. (mention a member of the household)? When was it? (it is important to specify that it is medicine which was taken for anything, not necessarily for a health problem, the last time really for so-and-so and so-and-so, that can be this morning, that can be 2 days ago…)

- Why was this medicine used? Were they intended to solve a health problem or to relieve pain?
- If yes, can she explain how this disease or this pain manifests or starts? What causes this disease or pain? And what was the time between the feeling of the pain and the taking of medicine?
- If not, was there another reason to use this medicine? Is it as a preventive measure? If yes, can she explain why it was prepared?, how it works on the body, on which places of the body?
- Where did she buy these medicines (precise place: which pharmacy, which health centre, which chemical store…)? Otherwise how did she get it?
- How much did they cost and who paid for them (with what money)? If it’s health insurance, how much do they pay for subscription each year, how does it work to subscribe and since when did they start the subscribing?

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8 Except for the mothers of the households, the other members of the household would not be asked questions to answer questions each for Part 1 of the interview guide. All other sections however remain the same for all members a household.
- Did anybody have advise them to take this medicine? Who? Why? What links do they have with this person?
- If he/she was a doctor, can she tell the whole story? Why did she go to the doctor? How long after the feeling of the pain? How long after the practice of self-medication?
- What has been done before (other medicines, herbal tea)?
- Why did she go to this doctor? How was it there? What did the doctor say?
- What did she have to do/to pay? Who paid for that? Why this person? With what money?
- How did it end? Did they have to go somewhere else? Why?

2-Households’ illness and health perceptions

Now not so specific but in general what are the illnesses that you often have in your household? The adults and the children? And how do you manage these illnesses? (would ask taking into account what she said before)
- What according to her are the causes of these illnesses? How do they manifest? Why, according to her, are these illnesses recurring? (take back each of the quoted illnesses)
- What are the practices or the behaviour which are adopted within the household to prevent illnesses or to maintain health? Why? Who advised her to do this or how did they begin doing it?
- What are the practices or the behaviour which they adopt generally when a member of the household is confronted with an illness or a health problem?

3-Medicines used within households and perceptions of antimalarial drugs

Which medicines do you use for these illnesses or health problems that you face in everyday life? Can you tell me about these medicines, how did you know them, how do you use them...? (would take back each of the quoted medicine)
- How did you know these medicines? Who explained to you how to use them?
- Do you know: chloroquine, quinine, nivaquine, fansidar, sulfadoxine, Combimal, Maloxine, Malafan, ACT, Coartem, Lonart, Lumartem or other brand names like that? What are these medicines for? Has you used some before? If not why?
- Are there any difference between these various medicines? What is it? What is each of them used/sold for?
- Can you mention other medicines that do the same job?
- Have you noticed any negative effects of some of the medicines we’ve just spoken about (would take back each of the quoted medicine + antimalarial). Are these medicines good/adapted in the body of certain persons and not in that of the others? Have you experienced a situation like that?
4- Place to buy medicines

You explained to me that you buy medicines there and there (mention the various places that the person quoted before in the interview: pharmacies, public, private, mission health centres, chemical shops, NGO’s…). Can you tell me why you go there?

- What are the reasons that influence you to choose one over the other?
- Does it depend on the type of medicine that you want? If yes, what are then those types of medicines?
- Does it depend on your movements in town? Or for other reasons?
- How do you perceive for the pharmacy compared with the chemical shop (would ask the same question for all the quoted places)?

5- The kind of health care

Just before, you spoke to me about the various places where you can consult when you have a health problem or a disease and the various things that you can do (would refer to the care practices or places quoted in the point 1 and the point 2: self-medication, herbal teas, public health centres, health posts, CHIPS compounds, private health centres, mission hospitals, small clinics, traditional healers, religious places). What do you think of each of these ways of care? What are your perception of them, comparing one to another? Why / in which cases do you do each of them?

- Which one do you often use and which one do you rarely use? Why?
- Why don’t you do or go to other places of health care facilities that exist in Ghana (would refer to the care practices or the places which have not been quoted by the person)? What do you think of these other kinds of care?

Well, we’ve ended the interview… Do you have anything else to add to all that has been said? Thank you very much for giving me your time …

6) Inventory of the “home pharmacy” (to be done after the interview, without recorder)

- Do you have a “home pharmacy” / a place where you keep your medicines at home? Can you show it to me?

If it is possible, a picture of the “home pharmacy” and of the place where it is kept would be taken. All the medicines of the “home pharmacy” would be listed in a small note book. The discussion around the interview guide would be extended but in a less formal way, talking about the utility of some medicines, why have they been used, etc...

I would observe how medicines are stocked, how this “home pharmacy” looks like, inside what and how it is kept. Are there various “home pharmacy” in the household, how are the medicines preserved, how do they look like (dirty, damaged…), etc.
**Household sociodemographic characteristics** *(to be taken at the end of the interview, once the recorder is off)*

Level of studies of the father and the mother:  
Profession / activities of the father:  
Profession / activities of the mother:  
Age of the father and the mother:  
Tenant / Live in the house of a relative / Owner:  
Monthly average income of the father:  
Monthly average income of the mother:  
Mother tongue / group sociolinguistics / geographical origin of the father and the mother (where they were born):  
Religion, if Christian specify the church:  
Owner of a vehicle? If yes, which kind:
APPENDIX TWO: Interview guide with owner of pharmacy/chemical shop

Introduction: Good morning, I am student reading sociology at the University of Ghana, Legon. I have had interviews with local residents on questions around health but not in the sanitary sense rather in the social sense: the perceptions that people have on health problems, the way health is taken care in the household… I also need to have the point of view as a health professional/owner of this shop/operator of this shop as some of the people I interviewed came to this chemical shop/Pharmacy. This study is completely anonymous, all that we are going to talk here will remain strictly confidential

Could you tell me about your career until today, your training, the various posts which you have occupied?

1) Career
- His/her training (date, place, country of training) and professional journey till late
- Why did he/she decide to work around pharmaceuticals?

2) History of the shop

What was the motivation for starting this shop, when was it (date of opening), on whose initiative, why did you choose this name?
- How he/she managed to create the shop (support, preliminary capital),
- Name of his/her shop, why this name?
- Date of its opening
- Origin of the capital
- Links with another wider structure
- Which relations with Ghanaian authorities, Ministry of Health, Pharmacy Council (authorizations, exact procedures)
- Various steps of evolution of the shop
- What recent changes has been done?
- Are there planned changes?

3) Current functions of the owner and relations within the shop with his/her employees (where applicable)

What is your day-to-day work, what are the tasks and duties which you perform and how do you manage your team?
- How does he/she organize the work within the team?
- Who works for him/her, since when, which trainings?
- What are their duties? (for each of them)
- System of rotation
- Is there a pharmacist
- Has he/she particular strategies of management?
- Are there training for staff from time to time?
- Does he/she has some particular difficulties?
- What is the mode of recruitment of the employees and the salary scale?

4) Modes and sources of supply

Can you tell me about your pharmaceutical and herbal modes of supply?

- What are his/her sources of supply?
- How does it work? Through which kind of companies? Where?
- Why such a wholesaler, rather than others, according to which factors does he/she choose them (price, proximity, payment plan, promotion, some advantages…)
- Does he/she receive medicines directly in his/her shop? Why? From which companies? Why don’t they always make purchases like that?
- Does he/she go for certain medicines from certain wholesalers and for other medicines from other wholesalers?
- Which role does Okaishie play on the subject, with regard to the supply of medicines?
- Does he/she knows the history of Okaishie, when did this market start?
- Relations with medical and sales representatives. Are there advantages if they sell more medicine promoted by certain sales representatives?
- Who takes care of the activities of purchasing drugs? How often do they purchase?
- Can he/she explain the activities which he/she leads to the supply of these medicines?
- Do he/she import medicine and what types of medicines?

5) The different categories of pharmaceuticals

Can you tell me about the various medicines that you sell, which ones do you sell most, for which health problems?

- What medicine does he/she distribute? What various categories?
- For example from which country does the medicines that he/she distribute come from?
- What does he/she thinks about these various categories: "local products", "imported products", "Indian products"?
- According to which factors does he/she choose to distribute some of them or maybe none all?
- For example: Antimalarials: from which countries, which ones are the best, the most effective, question of price, how does he/she choose to stock up with some of them and not others? SP? Branded ACT? Green leaf ACT, chloroquine, quinine…

- How do his/her customers perceive medicines from his/her perspective, considering the various categories of medicines?

- How come that there are so much medicine against malaria, so many different names, in which cases it is necessary to suggest one or the other? Are some of them more effective than others? Which one? Why?

- How does he/she sets the price of medicines which he/she sells?

6) The customers

How would you describe the relations with your customers, are there various categories of customers, do you have any problems with any of them?

- Who are his/her customers (taking into consideration socio-economic classes)

- What are the health problems which worry them most?

- What are their marketing strategies for selling?

- Is he/she helped by sales representatives?

- Does he/she sometimes practice preferential price (sale price, promotion)? For whom? In what cases? How does it work?

- Other marketing strategies?

- The question of health insurances (Do they take it? How does it work? )

7) The current local context:

Can you tell me about the current Ghanaian context around pharmaceutical? What are the positive points, the improvements? What are the difficulties? Are there any incoming changes?

- How are his/her relations with the Ministry of Health, the Pharmacy Council?

- Is there any dysfunctions? (Problems in supply and availability of medicines)

- Are there stormy questions in the Ghanaian pharmaceutical world lately (like the story with Tobinco last year, stories around fake drugs, etc.)?

- What does he/she think about the involvement of transnational actors in the distribution of Pharmaceuticals (Global Found, Bill and Melinda Gates, etc.)?

- Is there any problems in terms of pharmaceutical regulation?

Do you have anything else to add to all that has been said? Thank you very much for making the time.
APPENDIX THREE: Bi-Monthly Monitoring

To complete the monitoring, take the composition of the households taken during the interviews with the mother

Check if it is possible to ask to the households (those who know how to write) to write in a note book about all the medicines consumed by everyone and to review the situation together every fifteen days. Ask them as well, if possible, to keep the boxes of the pharmaceuticals.

Question to begin: What medicine (any kinds of medicine: pharmaceuticals, homemade herbal teas, food preparations, already made herbal medicines, “neo-traditional” medicines, food supplements, etc.) was consumed for these last 15 days by the various persons of the household? We are going to begin with each one of you…

Household:

Date(s):

Filed by:

Monitoring n° /10

Number of templates filled for this monitoring:
Medicine prepared at home (leaves, barks, powders, herbal teas, food…):

I template for each consumed medicine. There is the possibility of putting several names of people, but attention would be paid to the dosage and to the reasons why they are taken.

- Name of the medicine for the person (in English and/or in local language):

- Detailed description (composition, which leaves, food, bark, powder, how is it prepared):

- Who consume it?:

- When, for how long, when during the day and according to which dosage?:

- For what reason(s) (which disease, which symptom, which health problem, preventive treatment, curative treatment, to keep healthy)?
- Who made it?:


- How did this person learn to prepare the medicine?:


- Where were ingredients bought (exactly where) and by whom?:


- How much was paid and with whose/which money:


- If it is a curative treatment, a description of the various care seeking behaviour for the sick person until the present day. That is to understand the illness episode and the other medicine(s) taken for it, would probe to understand the logic of the “care itinerary”, if there is one:
Already made herbal medicines, “neo-traditional” medicines, food supplements, etc. (Ghanaian, Chinese, Indian, others…):

I template for each consumed medicine. There is the possibility of putting several names of persons, but pay attention to the doses (posology) and to the reasons why they are taken.

- Name of the medicine for the person (in English and/or in local language):

- Detailed description (name, galenic form, composition, manufacturer, country of manufacture + packaging and illustration if unknown medicine, possibility to take a picture):

- Who consumed it?:

- When, for how long, when during the day and according to which dosage?:

- For what reason(s) (which disease, which symptom, which problem, preventive treatment, curative treatment, to keep healthy)?:


- Where was the medicine bought (exactly where) and by who?:


- How much was paid and how much and with whose/which money?:


- Who advised/prescribed this medicine? (exactly who)?:


- If it is a curative treatment, description of the various care seeking behaviour for the sick person until this day. That is to understand the illness episode and the other medicine(s) taken for it, probe to understand the logic of the “care itinerary”, if there is one:


- If the medicine was prescribed by a tradi-therapist, ask why this specific therapist was consulted, is he/she often consulted?, etc.:
The pharmaceutical drugs:

1 template for each consumed pharmaceutical or each consumed logical association of pharmaceuticals. In case of prevention treatment, there is possibility of putting several names of persons, but pay attention to the doses and to the reasons why they are taken

or

In case of curative treatment, 1 template by person for the one pharmaceutical or for the various pharmaceutical(s) consumed, but attention to the dates and to the doses.

- Name of the pharmaceutical for the person (in English and/or in local language):

- Detailed Description (name, galenic form, composition, manufacturer, country of manufacture + packaging and illustration if unknown medicine, possibility to take a picture):

- Who consumed it?:

- When, for how long, when during the day and according to which dosage?:

- For what reason(s) (which disease, which symptom, which problem, preventive treatment, curative treatment, to keep healthy)?:
- Where was the pharmaceutical bought (where exactly) and by who?:

- How much was paid and with whose/which money?:

- Who advised / prescribed this medicine? (who exactly): 

- If it is a curative treatment, description of the various care seeking behaviour for the sick person until this day. That is to understand the illness episode and the other medicine(s) taken for it, probe to understand the logic of the “care itinerary”, if there is one:

- If the pharmaceutical was prescribed by a doctor, ask why this specific doctor / specific health centre was consulted? Where is it located exactly? Is it a public or private health centre? What is its size? Is he/she/it often consulted?:

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### APPENDIX FOUR: Household Profile

#### Household 1: Madina Zongo Junction  
**Socio- Economic Class: Middle Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favor</td>
<td>28</td>
<td>Tertiary (Polytechnic)</td>
<td>Teacher (Primary)</td>
<td>Tenant (Chamber and Hall)</td>
<td>Christian/ Presbyterian</td>
<td>No</td>
</tr>
<tr>
<td>Charles</td>
<td>35</td>
<td>Tertiary (University Degree)</td>
<td>Teacher (SSS)</td>
<td></td>
<td>Christian/ Presbyterian</td>
<td>No</td>
</tr>
<tr>
<td>Lawrencia</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawrence</td>
<td>4</td>
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</table>

#### Household 2: Madina Zongo Junction  
**Socio- Economic Class: Lower Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mavis</td>
<td>34</td>
<td>Primary</td>
<td>Seamstress</td>
<td>Tenant (Chamber and Hall)</td>
<td>Christian/ Presbyterian</td>
<td>No</td>
</tr>
<tr>
<td>Thomas</td>
<td>38</td>
<td>JSS</td>
<td>Carpenter</td>
<td></td>
<td>Christian/ Presbyterian</td>
<td>No</td>
</tr>
<tr>
<td>Frank</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bernice</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harriet</td>
<td>8 mths</td>
<td></td>
<td></td>
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</table>

#### Household 3: Kotobabi Down  
**Socio- Economic Class: Lower Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gladys</td>
<td>38</td>
<td>None</td>
<td>Cleaner</td>
<td>Kiosk</td>
<td>Christian/ Global Evangelical</td>
<td>No</td>
</tr>
<tr>
<td>Tettey</td>
<td>46</td>
<td>Middle (Form 4)</td>
<td>Carpenter</td>
<td></td>
<td>Christian/ Global Evangelical</td>
<td>No</td>
</tr>
<tr>
<td>Amiyo</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mavis</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esther</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agbefia</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shekina</td>
<td>11 mths</td>
<td></td>
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</table>

#### Household 4: Kotobabi Police Station  
**Socio- Economic Class: Lower Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doris</td>
<td>36</td>
<td>JSS</td>
<td>Hairdresser</td>
<td>Tenant (Chamber and Hall)</td>
<td>Christian/ Global Evangelical</td>
<td>No</td>
</tr>
<tr>
<td>Evans</td>
<td>38</td>
<td>JSS</td>
<td>Dealer in Electricals</td>
<td></td>
<td>Christian/ Global Evangelical</td>
<td>No</td>
</tr>
<tr>
<td>Etornam</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household 5: Kotobabi Pig Farm</td>
<td>Socio-Economic Class: Middle Class</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------</td>
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<tr>
<td><strong>Pseudonym</strong></td>
<td><strong>Age (years)</strong></td>
<td><strong>Educational Level</strong></td>
<td><strong>Profession/Activities</strong></td>
<td><strong>House Arrangements</strong></td>
<td><strong>Religion</strong></td>
<td><strong>Owner of Vehicle</strong></td>
</tr>
<tr>
<td>Ophelia</td>
<td>33</td>
<td>SHS</td>
<td>Cashier</td>
<td>Tenant (Chamber and Hall)</td>
<td>Christian</td>
<td>Yes Tundra</td>
</tr>
<tr>
<td>George</td>
<td>34</td>
<td>Middle School (Form 4), Police Academy</td>
<td>Policeman (CID)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Princess</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prince</td>
<td>1 yr, 8 mths</td>
<td></td>
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<table>
<thead>
<tr>
<th>Household 6: Cantonments</th>
<th>Socio-Economic Class: Middle Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pseudonym</strong></td>
<td><strong>Age (years)</strong></td>
</tr>
<tr>
<td>Patricia</td>
<td>34</td>
</tr>
<tr>
<td>Eunice</td>
<td>59</td>
</tr>
<tr>
<td>Addo Dombo</td>
<td>59</td>
</tr>
<tr>
<td>Caro</td>
<td>9</td>
</tr>
<tr>
<td>Faith</td>
<td>7</td>
</tr>
<tr>
<td>Kelvin</td>
<td>5</td>
</tr>
<tr>
<td>Chillu</td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Household 7: East Legon-Adjiringanor</th>
<th>Socio-Economic Class: Upper Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pseudonym</strong></td>
<td><strong>Age (years)</strong></td>
</tr>
<tr>
<td>Anthonia</td>
<td>35</td>
</tr>
<tr>
<td>Mary</td>
<td>72</td>
</tr>
<tr>
<td>Francis</td>
<td>38</td>
</tr>
<tr>
<td>Manuel</td>
<td>35</td>
</tr>
<tr>
<td>Kingsley</td>
<td>34</td>
</tr>
<tr>
<td>Edmund</td>
<td>25</td>
</tr>
<tr>
<td>Kimora</td>
<td>1 yr, 7 mths</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Household 8: East Legon, Adjiringanor</th>
<th>Socio-Economic Class: Middle Class</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pseudonym</strong></td>
<td><strong>Age (years)</strong></td>
</tr>
<tr>
<td>Laurie</td>
<td>32</td>
</tr>
<tr>
<td>Joe</td>
<td>35</td>
</tr>
<tr>
<td>Nii Afotey</td>
<td>6</td>
</tr>
<tr>
<td>Pseudonym</td>
<td>Age (years)</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Bernice</td>
<td>34</td>
</tr>
<tr>
<td>Michael</td>
<td>39</td>
</tr>
<tr>
<td>Perpetual</td>
<td>5</td>
</tr>
<tr>
<td>Selorm</td>
<td>3</td>
</tr>
<tr>
<td>David</td>
<td>1</td>
</tr>
<tr>
<td>Houda</td>
<td>33</td>
</tr>
<tr>
<td>John</td>
<td>12</td>
</tr>
<tr>
<td>Matthew</td>
<td>11</td>
</tr>
<tr>
<td>Grace</td>
<td>6</td>
</tr>
<tr>
<td>Godfred</td>
<td>5</td>
</tr>
<tr>
<td>Kwasi</td>
<td>23</td>
</tr>
<tr>
<td>Susanna</td>
<td>38</td>
</tr>
<tr>
<td>Papa Nii</td>
<td>43</td>
</tr>
<tr>
<td>Aaron</td>
<td>9</td>
</tr>
<tr>
<td>Elijah</td>
<td>3</td>
</tr>
<tr>
<td>Hannah</td>
<td>9 mths</td>
</tr>
<tr>
<td>Safia</td>
<td>35</td>
</tr>
<tr>
<td>Alhassan</td>
<td>49</td>
</tr>
<tr>
<td>Ameerah</td>
<td>5</td>
</tr>
<tr>
<td>Yidana</td>
<td>4</td>
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<tr>
<td>Pseudonym</td>
<td>Age (years)</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Ziblim</td>
<td>2</td>
</tr>
<tr>
<td>George</td>
<td>26</td>
</tr>
<tr>
<td>Latif</td>
<td>22</td>
</tr>
<tr>
<td>Gifty</td>
<td>22</td>
</tr>
<tr>
<td>Sarah</td>
<td>14</td>
</tr>
<tr>
<td>Rakiya</td>
<td>43</td>
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</table>

**Household 13: Labone**  
**Socio- Economic Class: Upper Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akpene</td>
<td>34</td>
<td>Tertiary</td>
<td>Housewife</td>
<td>Rented (3 bedroom</td>
<td>Christian/</td>
<td>Yes Lexus</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(University Degree)</td>
<td></td>
<td>Storey building)</td>
<td>Catholic</td>
<td></td>
</tr>
<tr>
<td>Auntie</td>
<td>72</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes Hyundai Elantra</td>
</tr>
<tr>
<td>Grace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shika</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes Jaguar X</td>
</tr>
<tr>
<td>Abeiku</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Benz C Class</td>
</tr>
<tr>
<td>Kofi</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yaw</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afia</td>
<td>1 yr, 10 mths</td>
<td></td>
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</table>

**Household 14: Madina Estates**  
**Socio- Economic Class: Lower Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rabiatu</td>
<td>22</td>
<td>J.S.S</td>
<td>Food seller</td>
<td>Household House</td>
<td>Muslim</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Chamber and hall)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mutia</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Farouza</td>
<td>28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mma</td>
<td>16</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hasana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lady</td>
<td>6 mths</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nura</td>
<td>3</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mariam</td>
<td>2, 6 mths</td>
<td></td>
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</tr>
<tr>
<td>Wahab</td>
<td>2</td>
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<tr>
<td>Ismail</td>
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</table>

**Household 15: East Legon, Adjiringanor**  
**Socio- Economic Class: Upper Class**

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marissa</td>
<td>33</td>
<td>Tertiary</td>
<td>Student (Law School)</td>
<td>Own House</td>
<td>Christian</td>
<td>Yes 4x4</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catholics</td>
<td></td>
</tr>
<tr>
<td>Daddy Kofi</td>
<td>48</td>
<td></td>
<td>Farmer</td>
<td></td>
<td>Christian</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Catholics</td>
<td></td>
</tr>
<tr>
<td>Kofi Junior</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adwoa</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Akosua</td>
<td>9 mths</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Household 16: Madina, Libya Quarters

Socio- Economic Class: Middle Category

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age (years)</th>
<th>Educational Level</th>
<th>Profession/Activities</th>
<th>House Arrangements</th>
<th>Religion</th>
<th>Owner of Vehicle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lara</td>
<td>28</td>
<td>J.S.S</td>
<td>Trader</td>
<td>Chamber and hall</td>
<td>Christian (Charismatic)</td>
<td>No</td>
</tr>
<tr>
<td>Wisdom</td>
<td>32</td>
<td>Polytechnic</td>
<td>Plumber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setornam</td>
<td>1yr, 5mths</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Household One: Household of Favour (Madina) - Middle Class Socio-Economic Category

The researcher found this household through a colleague in class. They happen to attend the same church. It was a 4 member household. The parents and 2 children. This household was quite warm. Apart from the first bi-monthly monitoring where one child had been sick and has been taken to the hospital, subsequently, the researcher did not record a lot of medicines for this household. Unfortunately, the household moved and the researcher had to find another household to replace it.

Household Two: Household of Mavis (Madina) - Lower Class Socio-Economic Category

The researcher found this household through the same colleague from my class. My class colleague and the father of the household were classmates in primary school. It was thus easy to connect with this household when I was introduced. This household had 5 members. The parents and 3 children occupying a chamber and a hall. This household stayed throughout the research. No major event happened that influenced their health practices. The major illness they were affected with was Malaria and skin rashes. The household visited the hospital just twice whilst I was with them.
Household Three: Household of Gladys (Kotobabi) - Lower Class Socio-Economic Category

The researcher found this household through a colleague in the office. This household had 8 members. The parents and 6 children. This household also stayed through to the end of the research. The mother of this household had no education at all. The environment they lived in was a salubrious one and the children had all manner of skin infections during the period of the study. They however never visited a health facility. The mother usually visited a chemical shop nearby. The father of the household was mostly absent during monitorings and did not seem interested in what was happening.

Household Four: Doris (Kotobabi)- Lower Class Socio-Economic Category

The researcher found this household during through a referral at a church in Kotobabi. After explaining my purpose to those in the immediate area, this mother was brought to my attention and after explaining the purpose of the research to her. She was willing to be a part of the study. At the second round of monitoring based on follow up questions, she told me she was pregnant and this affected the medicine intake of the household. In the course of the study, a grandfather and grandmother who were sick joined the household. The grandfather died after he went back to the village however, the grandmother stayed till after the mother delivered which was a baby girl. The presence of the grandparents as well as the pregnancy, influenced medicine intake.

Household Five: Ophelia (Kotobabi) – Middle Class Socio-Economic Category

The researcher found this household through the Assembly member of the area. This household consisted of 4 members however the father of the household stayed in Kumasi because of work. It was easy getting her on board the research. The mother however indicated at the beginning of the research that she was on maternity leave and when she
resumes, her schedules might not enable her to meet me often as she was a cashier at a restaurant and worked in shifts. I however assured her that would not be a problem as I would work around her schedule. That however turned out to be a problem in the course of the research when the mother returned full time to work. It was difficult to meet her at home. At a point in time, the household left to Kumasi to visit the father who was in the Police service. This caused a lapse in the research and afterwards, it was impossible to meet with her again so this household stayed through to the 6th monitoring round.

**Household Six: Patricia (Cantonments) – Middle Class Socio-Economic Category**

The researcher met his mother through a friend from the University. It was a 7 member household which was made of a grandparents a mother and 4 children. When I introduced myself and my purpose, the mother was reluctant to be a part of the research but she told me she would help because of the sister. As I would later find out, many calls to her were not answered and getting her for bi-monthly monitoring was difficult. After 4 bi-monthly of monitoring rounds, the researcher did not follow up on this household anymore because 2 subsequent visits were met with the absence of the mother. The mother told the researcher she has fibroid and has been asked to do a surgery but was scared of the consequences so she decided to try a herbal center which advertised the treatment of fibroid without surgery however that did not work.

**Household Seven: Anthonia (East Legon-Ajiringanor) – Upper Class Socio-Economic Category**

The researcher met this household through the assembly member of East Legon-Ajiringanor area. This household was a 7 member household. The mother of this household was very
warm. She lived in her mother’s house with her brothers together with her child because her husband was out of the country. Her mother had high blood pressure and as such, took medicines every day. But quite apart from that the medicines intake in the household was low. This household stayed through to the end of the research and was very understanding.

**Household Eight: Laurie (East Legon-Ajiringanor) – Middle Class Socio-Economic Category**

This household was that of the assembly man of the East Legon-Adjiringanor Assembly man, he had children under 5 and when I broached the topic of looking for households to aid in my research, he offered to be a part of the research. This is a 5 member household. This household stayed throughout the research. There were a few ailments like malaria, cough and cold and skin rashes over the 5 month period. The household also liked to take garlic capsules and blood tonics.

**Household Nine: Sharon (East Legon – Ajiringanor) – Middle Class Socio-Economic Category**

The researcher met this household through a friend. When I initially met the household, they were reluctant to be a part of the research. The blatantly told me that they needed to be paid for all the time I would be intruding into their space. It was only after a visit with my supervisor who assured them that the research was solely for academic purposes that they complied to be a part of the research. The father worked as a sales rep at a pharmaceutical company and knew a lot of medicines. He always had a number of medicines at home and offers some form of medications to the children when they were sick. They visited the hospital once during the period of the research. He indicated in an interview that he always visited the lab before going to the hospital so shorten the time he spent there. He also mentioned that the household usually visited the hospitals on Sunday when the number was
small. This household stayed throughout the course of the research. At the end of the research, the mother shared that she had a post-partum traumatic disorder after she had her first child and had to visit the psychiatric hospital for the care. She mentioned that she had been taking medicines for that but forgot to mention it at the beginning of the research. The researcher suspects that the mother did not mention it initially because she did not feel comfortable about it.

**Household Ten: Henrietta (East Legon- Adjiringanor) – Upper Class Socio-Economic Category**

The researcher met this household through the cousin of the assembly man. They fellowshipped at the same church. The mother was divorced and lived with her 4 children together with a house help. She told me she was very busy and she would not be able to make the monitorings each time. The researcher however though she could work around it but as the research progressed it was very difficult to get the mother. On some occasions, the mother told the researcher the household had not taken any medicines and it was not necessary to visit. The mother travelled after the third round for monitoring and afterwards, it was difficult to go back to this household after.

**Household Eleven: Susanna (Accra- Newtown) – Lower Class Socio-Economic Category**

The researcher met this household through a colleague at the office. They lived in the same neighborhood. This household was warm from the first day I met them and throughout the research. The father was not around all the time but the mother was always available for monitoring rounds and furnished the researcher with all the information that was needed. This household frequented private clinic a couple of times
Household Twelve Safia (Labone) - Upper Class Socio-Economic Category

The researcher met this household through a pharmacist in the research area. The mother of the household was very warm at the first meeting and throughout the research. This household had a household doctor who made calls and as such did not visit a health centre except for one occasion when one the children slipped in the bathroom and had a cut. She was rushed to the closet health facility which was SNNIT Hospital at Osu. The mother administered anti-malarials to the children almost every 3 months when they were not running a temperature. The mother said she had been advised by a doctor to prevent malaria rather than wait to cure as it was very dangerous. The father of the household had high blood pressure and took medicines every day. I did not meet him throughout the duration of the research. This household was huge one, apart from the 5 member nuclear household, it included 5 other members which consisted of nannies, house helps and security men. The mother most often gave information about the nuclear household and the auxiliary staff was not exactly helpful when I approached them.

Household Thirteen: Akpene (Labone) – Upper Class Socio-Economic Category

The researcher met this household through my supervisor. He worshipped with a household member. AT the first visit, I did not feel a lot of warmth but it had been difficult finding upper class households with children under 5 so I decided to work with them. The household warmed to the researcher as time progressed. The children in the household suffered a lot from cold and cough and the mother usually repeated prescriptions that had been given earlier by the doctor and this worked in most times however in cases where the children did not get better, she took them to see the doctor. She indicated that the cold and cough were mostly brought from school and the researcher noticed that the children indeed has almost no incidences of cold or cough whilst home on vacation. The grandmother of the household had
glaucoma and diabetes and as such, was on regular medications. This household consisted of 7 members. The father of the household did not live in the same premises as the house was the mothers’ household house but on the same street and was often around when the researcher visited but he was not included in the monitoring of medicine intake. The mother had resigned her job and was at home during the period I was conducting the research thus it was easy getting detailed information on medicines consumed. The household stayed through the research.

**Household Fourteen: Rabiatu (Madina- Estates) – Lower Class Socio-Economic Category**

The researcher found this household in Madina estates through the help of a roommate at the undergraduate level. This mother of this household was not enthused when I introduced the research to her but she agreed to be a part of it all the same. The household was a large one with about 11 members which included cousins, sisters and a grandmother. The conditions in which they lived motivated the researcher to stay with this household over the course of the period. The household took a lot of medicines for diarrhea and stomach problems and in some cases, cholera. This must be because the sanitary conditions of their environment festered such illnesses. The other member of the household took a lot of analgesics and antipyretics because they said they did a lot of hard work cooking and selling food. The grandmother of this household was knew a lot about traditional medicines however that did not influence household intake of medicines as they claimed it was too bitter. There was no herbal preparation during the period I was with them. This household stayed throughout the research.

**Household Fifteen: Marissa (East Legon- Ajiringanor) – Upper Class Socio-Economic Category**
The researcher met this household through the assembly man of the East Legon-Adjiringanor Area. It had been difficult finding the 15\textsuperscript{th} household for the research. This household was found, 2 months into the research. This was because it was difficult to come by upper class households with children under 5. An initial visit to the household was very encouraging and thereafter, the researcher visited twice a month for the duration left for the research. The father had high heart pressure and took medicines on a daily basis. The mother of the household at the beginning insisted the household did not take a lot of medicines however a number of medication were recorded at the end of the research.

**Household Sixteen: Lara (Madina) – Middle Class Socio-Economic Category**

The researcher found this household to replace the 1\textsuperscript{st} household that had moved. She met the mother at a shop of the second household. She spoke to her about the research and she agreed to be a part of it. The household was a 3 member one and medicine consumption was very low. The mother indicated that she always visited the hospital when she was sick and never went to a drug retail outlet directly. She joined the study at a later part of the research and as such 6 instead of 10 monitorings was done for this household.