FACTORS INFLUENCING THE PRICE OF MEDICAL SERVICES

A SURVEY OF THE PRICING BEHAVIOUR OF PRIVATE MEDICAL PROVIDERS IN KAMPALA, UGANDA

BY

BATUKA JAMES

BTKJAM001

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE DEGREE OF MASTER OF PUBLIC HEALTH – HEALTH ECONOMICS OF THE UNIVERSITY OF CAPE TOWN

MAY 2004

DECLARATION

I, Batuka James, declare that this dissertation has never been presented in this University or any other institution of higher learning.

Signed by

Signed by candidate

17th November 2004

Batuka James Date

This dissertation has been read and approved for submission by my authority as the university supervisor.

17th November 2004

Mr. Okore Okorafor Date

DEDICATION

This dissertation is dedicated to my late daddy, for the love and time we shared

Of my hands I give to you O lord,

Of my hands I give to you,

I give to you as you gave to me

Of my hands I give to you

ACKNOWLEDGEMENTS

I am deeply indebted to my supervisors, Mr. Okore Okorafor, a Masters program coordinator and Dr. Michael Thiede a lecturer in the Health Economics Units, University of Cape Town for their invaluable advise and supervision during the course of writing this dissertation, despite their heavy schedule of work.

I am equally obliged to Rose Apondi who complemented and provided invaluable guidance in my data collection and analysis efforts.

Special thanks go to the owners and staff of the sampled clinics in Kampala district who willingly sacrificed their precious time to answer the questionnaire.

The understanding and patience of staff of the Health Economics Units, University of Cape Town, especially Dr. Steve Thomas, Professor Di Mcintyre, Mr. Deus Bazira, Dr. Edina Sinanovic, Miss Susan Cleary and Mrs. Charlotte Muheki, and the love and support of the MPH-Health Economics class (2003-2004) cannot be over emphasized. Their moral, financial and psychological support at some of the most challenging times made all the difference.

I wish also to express my thanks to Dr. Jennifer Pitt and her parents for the love and support showed to me during my stay in Cape Town.

I wish to express my special thanks to Professor Rodney Ehrlich for all his kindness and have enabled me to achieve my dream by reducing the tuition fees for me.

Last but not least, I wish to express my special thanks for the love, encouragement, patience and support of my dear wife, Jennifer and children, Patrick and Paula.

ABSTRACT

Understanding the pricing behaviour of medical providers in private clinics is important for the effective regulation of the private sector and ensuring that there is no extortion of patients. There is a global trend to encourage delivery of health services by the private sector reducing the public role to stewardship. Understanding the factors that influence the price of medical services in an out of pocket setting is important in designing strategies necessary to control the price of medical care.

The study investigated the factors that influenced the price of medical services in Kampala district, Uganda. The respondents reported cost of drugs given to patients (type and dose of drug), other overhead expenditures, type of disease, income status of the patient and need to make profit as factors which influence the price of medical services.

On regression analysis, it was found that rent was a significant factor on the price of medical services across all disease conditions.

It was concluded that governments need to put in place effective regulatory mechanisms to ensure proper functioning of the private health sector.

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Glossary of Terms, Acronyms and Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ANOVA	Analysis of Variance
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
IMCI	Integrated management of childhood illness Unit
MOH	Ministry of Health
NDA	National Drug Authority
NGO	Non-Government Organisation
R	South African Rand
Rs	Indian Rupees
Ug. Shs	Uganda Shilling
URTI	Upper Respiratory Tract Infection
UPHOLD	Uganda Program for Human and Holistic Development.

Exchange rate used US$ = 2000 Uganda Shillings

CHAPTER 1

1.1 Introduction

The price of medical services varies extensively in the health sector. Like any other internationally traded service, medical service prices are determined by differences in border prices, price differences arising from inter-country differences in import tariffs and non-tariff barriers, and differences in in-country costs, including internal transport and delivery costs, trading mark-ups, turnover, domestic taxation, and payer willingness and ability to pay (Woodward 2001).

This study identifies the factors that determine the prices of medical services in private clinics in Kampala, Uganda. It observes and explores factors like overhead expenditure, turnover, cost of drugs, and competition. The study focuses on the private for profit ambulatory clinics in the capital city of Uganda with the aim of identifying the above-mentioned factors. Interventions that can be used to improve regulation of private clinics to ensure availability and affordability of medical services are then proposed.

In the health sector, it is difficult to have one price for a specific service because of heterogeneous nature of the services. There are multiple customers, several disease conditions, various treatment methods, many reimbursement systems, numerous pricing methodologies, and multiple

cost control tools. Research has shown that legislation, regulation, and market adjustments in one aspect of the market often result in chain reactions of intended and unintended consequences throughout the entire health sector (Strongin 2000). The quality of private health provision especially in developing countries is often very low, but it is popular because it often appears cheap (because partial doses may be sold) and accessible.

Broad improvements in human welfare will not occur unless poor people receive wider access to affordable, better quality services in health, education, water, sanitation, and electricity (World Bank 2004). Health is a fundamental human right and every government must ensure that its population has access to affordable health services. Providing communities with healthcare has been a contentious issue in many countries, with government being encouraged to adopt privatization of health services. The most important issue in the new world of privatization is whether there are mechanisms that strengthen the poor people's ability to monitor and discipline providers, participate in policymaking, and get effective services for their families (World Bank 2004). Therefore strengthening of the regulation and steward function of governments is very crucial.

1.2 Background

Uganda is among the poorest countries in the world. In 1999 the per capita income was estimated to be about US $ 320 (1998) compared to US $ 470 for Sub Saharan Africa (WHO 2001). The country has a domestic growth of 5.3% (World Bank, 1998). The country is situated in East Africa, covers an area of 241,039 square kilometers and is administratively divided into 56 districts. Uganda has a population of 24.5 million, with majority of the population, about 89%, rural. The annual population growth rate is estimated at about 3.5% a year compared with 1.1% for Sub-Saharan Africa (WHO 2001). Life expectancy is 43 years for both males and females. The illiteracy rate for females is 50% and 20% for males (Jeppson and Okounzi, 2000).

Uganda suffers from a heavy burden of diseases most of which are preventable. Diseases and conditions such as prenatal/maternal conditions, malaria, and infectious diseases, trauma, diarrhoea, malnutrition and HIV/AIDS cause 75% of life-years lost in Uganda (Deliver Project 2000).

The maternal mortality rate is 504 per 100,000 and 38% of the deliveries are carried out by trained attendants. Child Survival indicators are poor with infant mortality of 88 per 1000 and under five mortality of 152 per

1,000 (UDHS 2001). The developing countries under five-mortality rate average at 89.3 per 1000 live births (World Bank 2001).

In 1996, 46% of the population was living below the poverty line in Uganda with a GDP per capita of US$ 300 (World Bank 2000). Poverty is the main underlying cause of the poor health situation in the country, because the poor cannot afford the basic necessities like clean water and a balanced diet. Health care delivery is both by government and the private sector. The Uganda government expenditure on health, though still low, has increased over the last ten years from 2.5% in 1987/88 to 9% of the national budget in 1997/98 (Ministry of Health 2001). Funding by the government of Uganda, including local development, increased from 81.72 billion Shillings (US$40.9 million) in 1999/2000 to 106.2 billion Shillings (US$53.1 million) in the fiscal year 2000/01 representing an increment of 30%. This increment was mostly attributed to the non-wage recurrent budget, which increased from 38.42 to 54.74 billion Shillings (US$19.21 to 27.37 million) (Ministry of Health 2001).

The public expenditure on health per capita in Uganda was US$ 4.5 in 2000/2001 financial year (Ministry of Health 2001). In 1998/99, the Uganda government accounted for 20% of the total health expenditure, private sector 37% (Households out of pocket 34% and employers 3%) and donors 43% (Ministry of Health 2000). Studies had showed that the

majority of Ugandans barely living above the poverty line, had an out of pocket expenditure of $4.3 per head for drugs while the more affluent population contributed about $1.43per capita (Jeppsson and Okuonzi, 2000). This meant that the poor where spending a big part of their income on buying drugs and hence were bound to become more poorer.

The public health facilities are characterised by chronic absence of necessary medical requirements like drugs, gloves, gauze, etc making delivery of the services very difficult. This has resulted in low morale for the workers and poor health services. The poor quality of services in the public sector has forced people to turn to the private sector for health care. There are few formally organized mechanisms of health financing in the private sector hence making out of pocket payments/fee for service the major way for paying for healthcare for most people.

The private for profit sector in Uganda is not well organised, and most of the practitioners practice in their small clinics. A considerable number of clinics were found to be selling drugs to clients even without prescriptions (MOH-IMCI 2002). In the same study it was found that there was poor clinic compliance with registration regulations.

When one goes to the clinic to seek for health services, there is no defined price structure leaving the provider to decide how much one has

to pay. The situation is worsened by the fact that in Uganda most of the clinics prescribe and dispense medicines. This creates a conducive atmosphere for supplier-induced demand. The patients are not able to judge value for money and in most cases do not even know how much they are expected to pay because there are no defined price structures. The patient is then left to the mercy of the provider to decide on how much one should pay for the services provided.

1.3 Research Question.

The study investigated how Private for profit providers priced their services. What are the factors that providers take into account when determining how much a patient would pay for the service offered?

1.4 Purpose of the Study

The purpose of the study was to try to understand the factors that influence the pricing of medical services in the private sector in Uganda.

1.5 Research Objectives

1. To determine the factors which influence the price of medical care in private clinics in Uganda.

2. To measure the effect of each of these factors on the price of

medical care.

1.6 Justification for the Study

Private sector is thought to be more effective and efficient in delivery of health care (World Bank 1993). The private health sector is important because it has synergistic effect to the public health sector. The Uganda Health Sector Strategic Plan 2000/01-2004/05 intends to bring private health care providers into an identified segment of the health care system through contracting out public health services to the private health sector. The effect of movement away from the free public health services to the more expensive private health services needs to be assessed. Understanding the pricing mechanism of the private health sector is necessary in assessing this effect. The Health Sector Strategic Plan also intends to enact a law for compulsory Health Insurance for the formally employed and strengthening the regulation of the private health care sector. In order for government to form partnership with the private sector, it needs to understand how the private sector operates. Understanding the pricing mechanisms will also help in the formulation of health financing mechanisms like health insurance. The private sector if unregulated can easily exploit the patients.

Understanding how the providers price services may call for government regulation of the sector to protect the vulnerable patients from exploitation.

The study will bring to light the probable overcharging of patients by providers. Regulation to ensure fair and equitable prices will reduce the financial burden on the household and also increase access to health care.

The study could also help in policy change in the area of separation of dispensing from prescribing to reduce over supply of services (MOH 2002).

CHAPTER 2

2.0 Literature Review

A market for any particular good or service is essentially composed of the suppliers (sellers) and consumers (buyers). In a perfectly competitive market, price of goods or services being exchanged are determined by the interaction of the forces of demand and supply of the goods and services. Both producers and consumers base their respective production and consumption plans on the prevailing market price. When consumers pay a price for a commodity, they motivate the producer of that commodity and hence more of the same is produced and vice versa. The price paid becomes a vote for more production. Thus resources are channeled there! The demand for goods is dependent on one's ability to pay for the goods. The price also indicates to the producer/supplier, how much he can produce/supply. Price also reflects the cost of the inputs required to produce that good or service.

Under perfect competition all firms are price takers. Where there is a monopoly, or firms have some market power, the seller has some control over the price, which will probably be higher than in a perfectly competitive market. By how much more will depend on how much market power there is, and on whether the firm(s) with the market power are committed to profit maximisation. In some cases, firms may charge less than the profit-maximising price for strategic or other reasons.

When demand and supply are equal, the market is said to operate efficiently.

However because of a number of reasons the market for health does not meet the conditions of a perfect market. The existence of externalities, public goods, barriers to entry and asymmetrical information lead to market failure in the health market. The factor that more than one person benefits when treating diseases like Tuberculosis, measles etc creates externalities hence demands public intervention. The entry to the health market to produce health services is restricted to ensure that only competent persons provide health services but this hinders free market forces. This reduces the competition in the market and hence reduced efficiency.

The presence of asymmetrical information in the health market eliminates the principle of consumer sovereignty. The doctor patient relationship has frequently been modeled within the theory of agency. The principal-agency relationship is characterized by a principal (ill-informed individual) and agent (informed individual), both of whom are attempting to maximize their independent utility functions. The principal has to motivate the agent to choose his/her activities in a way that benefits the principal. This is done through the devising of compensation rules or incentives compatibility constraints (MacDonald 1984, Arrow 1986). Given that the agent has the choice of whether or not to accept the contract, the principal has to ensure that the contract is attractive to

the agent. In the health market the doctor (agent) to some extent acts in the patient's interests. What distinguishes the professional agency relationship in the health market from the basic agency relationship is that the professional includes part at least of the patient's interests in her own objectives (Evans 1984). Williams (1988) postulates a perfect agency relationship as one where the doctor gives the patient all the information the patient needs and the patient then makes the decision. In the health market it is actually the patient who gives the doctor all the information and then the doctor makes a decision for him. Williams (ibid) recognizes that the agency relationship in health care practice is not perfect since the doctors may be pursuing interests other than those of the patient in front of them. In the doctor-patient relationship, the issue of remuneration is complicated by the fact that defining and measuring health is complex. It is also difficult to establish the inputs of the agent in achieving the health outcomes. The bond of trust between a doctor and patient is one of the strongest professional relationships in society. When patients show up at a doctor's office, they are apt to ask two questions: "what is wrong with me?" and "what should I do about it?" If told that they have a disease, most patients trust the doctor to perform the right diagnostic and therapeutic procedures, with little idea of what those might be and what the charges will add up to.

The asymmetry of information in health care creates an incentive problem, resulting in more (or less) treatment being demanded than

would have been the case if the patient had full information and knowledge. This results in the possibility for supplier-induced demand (Hay and Leahy 1982, Rice 1984).

Over half of the 108 private doctors surveyed in Ahmadabad, India, believed that fee splitting (unnecessary referrals to other doctors or laboratories with the referring doctor receiving part of the fee), over prescribing of drugs and over use of diagnostics were high or moderately prevalent practices, primarily as a means of increasing doctors' income (Bhat 1999). Several studies carried out in a number of districts in Uganda have revealed irrational use of drugs in the treatment of malaria (Najjemba 1998). The studies found over supply of the drugs and use of 2nd and 3rd line drugs but the 1st line drugs as common practices. In USA, because of potential for abuse, physicians have been legally prohibited from selling drugs or owning pharmacies since 1934. Even a pharmacy in a medical clinic must be run as a separate business to avoid conflict of interest. In Japan, where no such law exists, the government sets price controls to keep physicians from overcharging, but that does not stop them from over prescribing. General practice physicians in Japan get about a third of their net income from sales of pharmacy items, and their patients are prescribed twice as many drugs as similar patients in the United States (Getzen 2003). In many countries there is minimal or no well organized form of insurance for provision of services. Private financing, particularly in developing countries, is largely

synonymous with out-of-pocket spending. It is usually assumed that the rich use private sector services more than the poor. Although this is generally true, the differences are not great. In nine of the poorest countries, an average of 47% of health care visits by the poorest 20% of people and 59% of such visits by the richest 20% were to private sector providers (both profit and non-profit) rather than to the public sector providers (Gwatkin et al 1999). The poor spend a greater proportion of their income on private care than do the rich. A review of the five national developing country studies from the late 1980s and 1990s showed that the poorest 20% spent 15.5% of their household income on health care compared with 5.2% spent by the richest 20% (Fabricant et al. 1999). The cost of health care among the poor can lead to deeper poverty because of the big bills. Poor people are caught in a vicious circle: poverty breeds ill health, and ill health maintains poverty (Wagstaff 2002). In poor countries over 50% of household expenditure on health is spent on drugs (WHO 2000). In India, people borrowed about Rs. 29 per Capita per year (about 16% of total health care expenditure) to finance their health costs (Duggal and Amin 1989). In some cases, borrowing was as high as their annual incomes. In Viet Nam out of pocket on health care might have added approximately 4.4% in 1993 and 3.4% in 1998 to the head count of people below the poverty line (Wagstaff 2001). Most of the poverty impact of out of pocket payments in Viet Nam was attributable to non-hospital expenses. The deleterious effects that ill

health has on household living standards are increasingly seen as an issue of social justice, possibly reflecting a view that income losses and health care payments associated with ill health are involuntary and simply the consequence of unwanted health "shock" (Wagstaff and Van Doorslaer 2001). This sets health expenditure apart from most other items in the household budgets and leads naturally to the view that price of health care needs to be reasonable and well regulated.

2.1 Private Sector

In the World Development Report 1993, the World Bank recommends that governments shift elements of health service provision from the public to the private sector (World Bank 1993). The World Bank report calls for reduced government role in service provision and advocates for stewardship role for government. The international advocacy for a greater role for the private health care sector is due to the benefits associated with competition. However, because of the asymmetry of information in the health market, private providers may instead respond to competition by increasing service intensity or raising quality of care. These alternative forms of competition may have adverse effects in the health care sector as a whole, such as cost inflation, as well as on individual patients through for example the use of unnecessary technology. In Uganda over prescription of drugs and use of injections were found to be common and were based on clients demands (MOH-IMCI 2001). Analysis of the form of

competition in health care market is important because it sheds light on the appropriate role for the government as a provider and regulator of health services. Since the usual market mechanism for establishing an optimal price-competition among suppliers for an informed consumer does not operate in medical care we need to understand how prices are set.

2.2 Price

Price is an important determinant of both the overall demand for health care and the choice of provider. The choice of provider is influenced by the difference in price between comparable alternatives. In Korea, the extended use of insurance created tremendous increases in demand for health services as well as demand for increased quality of services among the public (Yang 1995). The cost of health care includes not only the monetary costs but also non-monetary costs, such as the opportunity costs of traveling and waiting. Where the money price is low or zero (as with the public services) these other non-monetary private costs are more important (Becker 1965, Acton 1975). In developing countries public health facilities are characterised by long waiting hours and poor quality services. For the patient this represents a real cost and may explain why the private sector continues to flourish despite the existence of free or lower cost public facilities. Private health providers are more likely to adjust their prices for different clients. One of the characteristics of the

medical markets first noted by economics was that different patients pay different prices for the same service (Kessel 1958). The price discrimination reflects providers' behaviour for increasing their net revenues. Some price differences are attributable to differences in cost or value (for instance daytime visit as compared to night emergency). Studies carried in developed countries, such as New Zealand (Tilyard and Dovey1991), indicated price discrimination by the health providers. A study in Indonesia by Berman et al (1989) showed price discrimination according to the patient income. The wealthier were being charged more for health services. An old, dishonorable practice needs to be seen in a new light, namely making people without health insurance pay far more than others for needed health care (Donald 2002). The people without health insurance in America were being charged more than those with insurance because of lack of a bargaining power. Martin Luther King Jr. emphasized this when he said 'of all the forms of inequality, injustice in health care is the most shocking and inhumane'.

It is important to understand how the private health care providers price their services especially in unregulated markets common in the developing countries. The quality of care offered by many private providers in developing countries is poor (Swan and Zwi 1997, Brugha and Zwi 1998). Furthermore, poor people spend a greater proportion of their income on health care than do the rich people; often using less qualified or totally untrained private providers. Though users can identify

what constitutes for them a good quality service, there is limited evidence that they can assess the technical quality of services. Therefore the users cannot rightly put a value to service that they cannot fully understand. Users expect providers to act in their best interests, although this trust is often misplaced. Understanding the pricing behaviour of the providers will help in formulation of appropriate regulations to control patient exploitation. In working with the private sector, governments need to put in place strategies for: increasing coverage, improving quality of care and controlling excessive health care costs to the users, especially the poor. Governments generally do not set prices for health services in the private because of the difficulty in determining an appropriate charge where what constitutes appropriate investigation and treatment cannot be clearly defined. It is difficult to monitor the prices since the providers do not display prices. Legal and regulatory interventions are required to control costs and availability of inputs needed by private providers, the prices of the services they produce, the quantity and quality of the services. One may argue that in a liberalized economy like that of Uganda, market forces should be left to determine the price but it should not be forgotten that in the healthcare principal-agent relationship, the agent (provider) is far more powerful than the principal (patient). The patient needs protection from the powerful provider. Effective regulation requires sufficient state capacity to collect information, devise sound rules, and monitor and enforce compliance. Developing countries lack

these capacities. Governments typically do not use direct price regulation for health care services by private providers. However, government may attempt to regulate the private sector prices through setting prices for comparable public sector services. If the prices of the public sectors are low, the private sector health providers may be forced to set comparable prices for their services. This of course requires that the quality of services in the public sector is comparable to that in the private sector.

2.3 Ugandan Private Health Sector

Private medical practice is essentially a solo enterprise; group practice is uncommon while investor owned hospitals are rare. Less than half of the 25million population has access to governmental health services (MOH-IMCI 2001). The community relies to a great extent on the private sector, in its formal and informal shapes. A recent nation wide study including 14,000 households showed that outside home care in one form or another was sought in 65% of sick children. Of those, a formal or informal private provider was the source of care in 87% of fever, diarrhea and ARI cases. The same study showed that the important role of private health providers is not only simple uncomplicated childhood illness but also to severe illness (MOH-IMCI 2001). What is the private sector? It is conventional to define "private' providers as those who fall outside the direct control of government (Bennet 1992). Private ownership generally includes both for profit and non-profit providers.

Private ownership would include health care facilities owned by individuals who seek to earn profits, clinics, and hospitals owned by private employers, and those operated by religious missions and other Non-governmental organizations.

The National Health Sector Strategic Plan considers the private sector in general a partner in achieving public health goals. It encourages the inclusion of private sector in different aspects of health programs.

There are three types of private providers practicing in Uganda:

- The formally trained practitioners
- The informal trained practitioners e.g. nursing assistants and nurse-aides
- The traditional medicine practitioners e.g. traditional healers and traditional birth attendants.

Whereas laws to regulate private practice exist, the capacity of the government regulating councils and authorities are limited. It is estimated that 65% of private practitioners are not registered (MOH, IMCI Unit 2001). The government needs to create interventions aimed at supporting and motivating private practitioners to comply with standards and regulations in order to improve the practice in the private sector. In Uganda, the public health sector has existed alongside the private health sector since before independence. Poverty is recognized to be the main underlying cause of the poor health situation in the country (MOH-IMCI

2002). The persistently low quality and inadequacy of health services provided in public facilities has made the private sector an unavoidable choice for consumers of health care in Uganda. The prices of medical services in the private sector are often higher than those of the public sector but because of the perceived high quality of services, less waiting time and less access, the consumers still prefer the private sector. The government needs to improve the attitudes of providers and services offered in public health facilities.

A study done on the cost of malaria treatment in Tororo, a rural district in Uganda found the mean cost per episode to be 12,500 (US$7) Ugandan Shillings for an inpatient and 1,200 Uganda shillings for an outpatient (Bagorogoza 1998). Considering that more than 40% of the Ugandan population is living below the poverty line, this cost is high. In Peri-urban and urban areas, the cost of malaria treatment is even higher, especially in private drug outlets.

In Uganda, most private health care providers prescribe and dispense medicines, and in most cases the patient does not even know the type of medicine dispensed (MOH-IMCI 2002).

2.4 Competition

Internationally, entrance to the supply side of the health care market unlike other markets is restricted. There are professional standards required before one can be allowed to practice in this business. These

restrictions may result in less competition, which may lead to development of monopoly power. Monopoly power enables sellers to charge higher prices than they would in a situation of perfect competition.

Some health services (such as treatments for contagious diseases) have benefits both for the individuals who receive treatment and for others who are consequently protected from exposure to illness.

If the government does not ensure availability, these public goods may be under supplied by the private sector. (Gray, and Matsebula, 2000)

2.5 Drugs in Clinics

Drug costs are a major contributor to healthcare costs. The cost and type of drugs prescribed directly affects the prices of healthcare in a situation where there is no separation of dispensing from prescribing. The main objective of separating dispensing from prescribing is to create a checkpoint for providers so that there is no supplier induced demand and dangerous errors are checked in prescriptions. The price of healthcare may be controlled through drug price controls.

2.6 Prepayment Schemes

The presence of powerful buyers such as managed care organizations or health insurance schemes decrease the bargaining power of the providers. The powerful buyers are able to use their large business to negotiate favorably with the providers and hence get cheaper prices than

a single buyer. Individuals and health plans with small numbers lack bargaining power when they face largely unchecked physicians market power (Snyder 2003). The presence of powerful buyers causes competition among providers and also increases the bargaining power of patients.

2.7 Determinants of Healthcare Prices

In a study by the Governance Institute in August 2003 in America, to determine the pricing strategy for their member hospital, respondents rated a series of factors they considered when setting prices. Their relative importance appears below in descending order;

1. Required margins
2. Contractual allowances/projected reimbursement
3. Payer mix
4. Projected volume and case mix
5. Labour and supply expense
6. Return on investment
7. Public perception/reaction
8. Competitors' prices
9. Regulatory requirements
10. Cash flow/days cash on hand
11. Demands from payers
12. Medical staff input/reaction.

Required margins and contractual allowances were the top two factors respondents considered when setting prices.

Some of these factors like payer mix and contractual allowances are more important in a system with prepayment mechanisms. Most of the other factors are applicable to a system of out of pocket payments without prepayment mechanisms.

2.8 Summary of Literature Review

There was paucity of literature on factors infleuncing the pricing behaviour of private health care providers in a developing countries. Most of the studies found on pricing mechanisms in the health sector were done in prepayment health financing environments. There were no studies found on pricing factors under an out of pocket-fee for service envoriment in a developing country. Literature indicates that the market for health cannot be left to market forces only, governments in need to intervention through strong regulation.

CHAPTER 3

3.0 Conceptual Framework

3.1 Pricing Methods

There are two main types of pricing methods, these are: cost based pricing methods and market oriented pricing methods.

With Cost Based pricing method, no account is taken of the market requirements but a set amount is added to the costs of the inputs.

The expenses of maintaining a practice in the USA, take up almost half of all the funds flowing into the physician offices (AMA Physician Socio-economic Statistics, 2000-2002). Physicians must pay for other medical professionals and assistants who help them take care of patients, as well as taxes, rent, utilities, supplies, malpractice insurance and so on. In addition to all these costs, there are start up capital costs to equip even the most basic practice.

Therefore if the cost of inputs increases, the price of the product or service must also increase. The following are examples of cost based pricing methods:

1. Absorption cost pricing: the price of each product is dependant on cost of inputs used.

2. Target pricing: A target price is set and then costs are adjusted so that the price can be achieved.

Market based pricing methods depends on accurate analysis of the market and consumer requirements. The following are examples of market based pricing methods:

3. *Penetration pricing*: Used for new products wanting to gain market share. The product is priced low so that it is able to get a hold in the market.

4. *Market skimming*: It is used for new innovative products when there is little competition and the product is popular. High prices are charged during the first few months.

5. *Loss leader pricing*: charging below cost price to try and attract customers to other products.

6. *Psychological pricing*: Hitting price points that are significant e.g. R999.99 sounds better than R1000.

7. *Price discrimination*: Charging different people different prices for effectively the same product or service. It is commonly used in the service industry. Price discrimination is socially accepted and pervasive in medicine. The most common form, charging patients with higher incomes and/or better insurance more, has the advantage of appearing socially beneficial and fair (Getzen 2003). In the USA, the federal government practices price discrimination by making higher income states pay a higher proportion of Medicaid expenditures. The profit-maximizing price for a provider to charge in a market depends on the price elasticity. The

major reason for price discrimination is to increase revenue. The change in revenue, marginal revenue, depends on price elasticity as well as price

Marginal Revenue = Price (1 + 1/elasticity)

To maximise revenue when providing two different types of care, physicians should charge different prices even if their costs are the same for each service and should charge a higher price where demand is least price sensitive.

8. Discounting pricing: offering lower prices for a set time period to try and boost sales and sell off unwanted stock.

Ideally prices should be fixed based on a cost-plus formula, which includes indexed time cost of doctor and other staff. The mark up over cost should factor in things like urgency and seriousness of treatments, frequency, volumes etc. In normal markets, price plays an important role in determining demand and supply of a good or service. In health care, price competition, which is normally used as a virtue in other markets, is considered a vice. It is deemed 'unethical' for the medical profession to indulge in price competition (Mooney 1992).

The existence in many countries of some form of health insurance also affects the market for health care. Once premiums are paid, then prices at the point of consumption are either zero or heavily subsidized. The insurance companies and/or governments set the prices for medical care, and the providers have to accept them.

In Uganda where the medical care in the private sector is predominantly fee for services, the providers decide the price to charge to patients. Based on cost plus pricing method, the following are some of the items that may influence the providers in setting prices for medical care:

1. Salaries of staff
2. Rent, electricity, water, etc
3. Cost of medicines
4. Cost of other medical supplies like gloves, syringes, cotton wool, etc
5. The average number of patients seen per month
6. Taxes
7. The location
8. Terms of payment whether credit or cash.

All these facts may contribute with varying magnitude to the price charged. In addition to the factors mentioned above the income status of the patient may also influence the price as price discrimination is has been reported to occur in medical care pricing.

CHAPTER 4

4.0.0 Research Methodology

4.1.0 Introduction

This chapter provides a description of how the data used for this study was generated. The processes of study design and data collection are also described.

4.2.0 Study Design

A descriptive cross-sectional survey was used to address the objectives of this study. This descriptive cross-sectional survey was preferred because it is able to provide a comprehensive source of information in a short period of time.

4.3.0 Study Sites

The study was conducted in the five Divisions of Kampala. Kampala was studied because it is the capital and has the biggest number of private health care providers. The five divisions are: Nakawa, Central, Rubaga, Kawempe and Makindye.

Kampala has a population of about 1 million residents and a two to three fold fluctuating day and night population, as a result of those who work in Kampala but reside in other districts. It has 5 administrative divisions, 99 parishes and 840 villages. About 40% of the population resides in informal settlements. Central division is main business district of the city

and has also the rich suburb of kololo formerly occupied by the colonial masters. Nakawa division consists of mainly civil servants has it has many flat blocks. Kawempe division has more of the lower class and big part of it slums and often floods when it runs. Rubaga and Makindye consist of both middle and lower class people. Both divisions have slum areas, and Makindye has both military and police barrack.

According to the Registrar of the Medical and Dental Practitioners Council there were 1128 registered clinics nationally of which 340 were in Kampala district by 2003.

A sample of 100 clinics was selected from the five divisions using systematic probability sampling. A total of 20 clinics per division were sampled and their respective in charges interviewed. In Uganda most private clinics are in the urban areas with Kampala having the highest number (about 30%).

The population of this study consisted of all clinics in the district. However not all clinics were included in the study because of both financial and time constraints. Some of them were unwilling to participate in the study. Seven clinics refused to participate in the survey citing fears that the interviewers where from Uganda Revenue Authority and could use the information for tax purposes. Each of these clinics was replaced by the next clinic and hence the interviewers where able to get all the 100 clinics.

4.3.1 Sample Selection

The study sample was selected randomly but was not based on statistical representation. The study was conducted in the five divisions of Kampala City and 100 interviews were conducted at clinics. The sample universe included a health worker or owner at the clinic at the time when the interviewer went to the facility.

The objective of the design was to give every sample element (i.e. eligible outlet) an *equal* chance of being chosen in the study. This objective was achieved by selecting elements with probabilities proportionate to the population size of successive area *clusters*, and by using methods of *random* selection at every stage of sampling.

Sample selection involved a *three-stage design*:

First-stage: to *cluster* and randomly select *primary sampling units* [PSUs];

Second-stage: to randomly select *sampling start-points* [SSPs];

Third stage: to randomly choose a clinic and talk to the available respondent.

Primary Sampling Units (PSUs)

The primary sampling unit for this Survey was a randomly selected parish within the division. The master sampling frame in the division

were parishes from which 100 clinics were randomly chosen for the survey.

Stage One: Determining number and selecting clinic to visit (PSUs)

This stage of sampling was to determine how many and which particular clinic in the division to visit.

The number of clinics per division was almost the same in all the five divisions, therefore a decision was taken to sample and interview 20 clinics per division.

Stage Two: Selecting Sampling Start Points (SSPs)

A **Sampling Start Point** (SSP) was selected for randomly selecting clinics. Thus there was start point per division. This procedure had the effect of further clustering the sample into manageable geographic areas for logistical purposes.

For each division, a map was obtained that showed either the location of clinics or at least the physical address. A *primary sampling start point (PSP)* was randomly selected using the following "randomized grid method" and 20 clinics around the *start point* were then chosen randomly.

Because the actual condition on the ground in all the parishes was not know, a second sampling start point was chosen as a reserve or substitute if the PSP may be inappropriate in terms of the survey's

sampling rules. The second sampling start point is called the substitute sampling start point (SSP) chosen similarly.

Stage Three: Selecting clinics

The field supervisor selects (as randomly as possible from his/her knowledge of the area) a point like a street corner, a school, a water source or a church. The four Enumerators / Fieldworkers were then instructed to walk away from the starting point and each enumerator was instructed to choose the third clinic on the right as the clinic for the interview. They were then to follow the procedure until 20 clinics were selected and respondents interviewed.

The interviewers were instructed to replace clinics, which refused to participate in the study. The next clinic would be included in the study in case of refusal to participate.

At times it was difficult to differentiate a clinic from a drug shop because some were working as drug shops at the same time as clinics. Such outlets were classified according to the license they held. Another problem was that some respondents did not want to give sensitive financial information because of the fear that the Uganda Revenue Authority could use the financial data given for tax purposes.

4 .3 .2 Selection of Diseases for the Survey

Three disease conditions for adults and children were included in the survey because of time and financial constraints. The disease conditions

studied were determined using a pilot study conducted in 20 clinics in the district to determine the most prevalent conditions in the clinics. The respondents were asked the three diseases for which they received the highest number of patients in a month. A number of diseases were selected in order to determine whether there were any major variations in the pricing for the various diseases. The initial idea was to use the same disease conditions for both adults and children. However after the pilot survey to determine the most prevalent diseases for adults and children, it was found that the most prevalent disease conditions are different. The background information indicated that the major diseases in Uganda are malaria and preventable infectious diseases like pneumonia, measles etc. Malaria was found to be the most prevalent disease condition for both adults and children. STDs, Ulcers and hypertension were found to be highly prevalent in the clinic for adults. Measles, upper respiratory tract infections and diarrhea were found to be prevalent among children. Malaria, Ulcers and hypertension were studied for adults, and Malaria, Upper respiratory tract infections and diarrhea were studied for children. STDs were eliminated for adults because there are various types of STDs and it would be difficult to differentiate the various types. Measles were not included for children because there are various conditions, which occur together with measles. Measles is a viral condition that can present with various conditions. It was also believed that measles might have appeared in the list because there was a nationwide campaign for

eradication of measles. There were a lot of messages about the dangers of measles and call to take children for immunization. Actually it was compulsory for all children below 10 years to be immunized and one had to produce an immunization card to be allowed in school.

Malaria being very prevalent, a number of different drugs were being used in the management of the patients. The cost of the different drugs used for any given disease condition varies, and therefore questions were designed to ensure that the different prices charged when using the various drugs are captured.

Only drugs in standard treatment guidelines were included in the study.

4.3.3 Selection of Severity of Disease Condition

In comparing prices the study used non-severe forms of the disease conditions as the clinics are basically for ambulatory cases and severe cases are supposed be referred to health centers or hospitals. Treatment prices for adults and children were sought. Consultation fee per patient was also sought. For clinics with laboratories, the lab costs for investigating the various disease conditions were sought.

4.4.0 Data Collection

A face-to-face questionnaire was used to obtain data from the respondents. Data about the average prices for the various drugs used in the management of malaria was collected from the wholesale pharmacies. Data about the various operational costs incurred in the

clinics were collected. Due to lack of proper records, the data collected were the reported figures by the respondents.

4.4.1 Questionnaire (see Appendix 1) A pre-coded questionnaire with minimal open questions was administered to the in-charge or his/her designee of the clinic in order to gather the following information

a. Average number of patients who visit the clinic per week
b. Average number of patients per disease condition who visit the clinic per week.
c. Price charged for management of the various disease conditions in the clinic.
d. Factors that influence pricing.
e. Overhead costs (salaries, rent and rates, other)
f. Presence of price discrimination
g. Consultation fees charged per patient
h. Problems, constraints and possible solutions

4.5.0 Quality Control

Questionnaires were written in English since people who are licensed to operate clinics in Uganda have medical qualification and they are able to understand English, which is the official language in the country.
Reliability and validity were improved through pilot studies.

4.6.0 Field Management

Two interviewers were hired for collecting data. Interviewers matched in terms of level of education were selected. These interviewers were thoroughly trained to ensure maximum reliability, and to ensure that they do not deviate from the set objectives.

In order to ensure quality and reliability, data from every fourth premise was checked by the field officer, by re-administering the questionnaire at a later date.

All questionnaires were checked at the end of each day to ensure that they are accurately completed

4.7.0 Data Management

Information on price, monthly turnover, and other overheads was collected from 100 clinics.

STATA program and Excel spreadsheets were used for analysis of data collected to obtain descriptive statistics. Regression analysis was used to determine to what extent these factors influence prices of management of the various conditions.

4.8.0 Model Specification

Price (Disease) = f (- Average number of patients seen in clinic per week; – Average of patients seen with a particular disease per week; + Rent; + overhead; + distance from the nearest clinic)

	Factor	Expected Signs
1	Average number of patients seen per week	-
2	Average number of patients with the disease seen per week	-
3	Rent per month	+
4	Other overheads	+
5	Distance to nearest clinic	+

The model is based on the theoretical framework discussed in the literature review. It shows the variables that were used in regression analysis. In the model it is assumed that cost price of drugs, overhead expenditure, distance to nearest clinic and rent of the clinic have positive influence on prices charged to patients. If they have a high value, the price is likely to be high. The average number of patients seen per week in the clinic and the average number of patients with a particular disease seen per week were expected to have a negative influence on the prices charged. The contribution to fixed overheads is expected to decrease with the increase in the number of patients seen per week.

CHAPTER 5

5.0 Descriptive Statistics

The respondents were owners or officers in charge of the clinics. They included medical officers (doctors), clinical officers, midwives or nurses.

5.1 Factors Affecting the Amount Charged For Treatment

Depending on the pricing strategy for a firm, various factors may influence the price of a service or product. This may include costs involved in the production of the service, environmental issues like competition, regulation or consumers' ability and willingness to pay. The respondents were asked to give factors that influenced the price of medical care in a clinic and the factors reported are summarized according frequency of being reported in the table below.

Table 5.1 Frequency of factors that affect the amount charged for treatment.

Factors	Frequency	Percent
Cost of drugs given to patient	56	34.5%
Other expenditures the health facility incurs e.g salaries	34	21%
Type of disease	22	13.5%
Income status of the patient	20	12%
Type of drug	20	12%
The dose given	10	6%
The need to make profit	2	1%

The most frequent factor that was reported by the respondents to affect the price charged to the patients was the cost of drugs, followed by other overheads like salaries. Making profit was the least cited.

In another study, the required margins and contractual allowances were the top two factors respondents considered when setting prices (Governance institute 2003).

5.2 Number of Patients

The average patient turnover per clinic and case mix may directly have influence on the price charged for services. A high turnover may lead to low prices because of decreased unit contribution towards fixed costs. A high turnover may also lead to increased prices where there is low

competition or where the patients perceived high prices as a sign of quality.

Using the reported average number of patients per week (124), the average number of patients per month per clinic is 496.

The average reported number of Adult malaria cases per clinic per month is 117.

The average reported number of child malaria cases per clinic per month is 151.

The total average reported number of malaria patients per month is 268 representing 54% of the total number of patients in a clinic per month. This means that malaria treatment may be a major contributor to the income of any clinic in Kampala.

The average reported number of adult hypertension cases per clinic per month is 15. This represents only 3% of the total number of patients in a clinic per month.

Average reported number of Child URTI cases per month is 60. This represents 12% of the total number of patients in a clinic per month.

Average reported number of Ulcer patients per month is 25. This represents 5% of the total number of clinics per month.

Average reported number of child diarrhea cases per clinic per month is 41. This represents 8% of the total number of patients in a clinic per month.

5.3 Price for Healthcare

In a study by the Commercial Market strategies project, on the buying and selling of malaria treatment in the private sector in Uganda, the most commonly bought antimalarial drugs were chloroqiune tablets (47.8%); Fansidar/SP tablets were the second in line of preference (28.3%). Other popular medicines bought by the consumers included quinine (11.2%) and Metakelfin (3.1%). In the same study it was found that consumers who purchase drugs directly from drug outlets like pharmacies and drug-shops spent between 40 and 500 Uganda shillings when buying treatment for malaria.

In management of malaria various drugs can be used and this has influence on the price charged in the management of disease. The respondents were asked the price of drugs used in the various disease conditions in adult patients and the reported prices are summarized in the table below.

Table 5.2 The Average Cost of Managing the Disease Conditions for Adult Patients

Disease	Drug type	Average cost in Ug. Shs		
	Medicine		Tablets	Injections
Malaria				
	Chloroquine		3,319	6,730
	Quinine		5,006	7,544
	Fansider		4,040	
	Artemether		17,037	19,063
	Amodiaquine		3,541	
	Arsumax		18,146	
	Metakelfin		5,912	
	SP+ Chloroquine		5,867	4,800
	Primaquine		3,310	
Hypertension		15,699		
Ulcers		12,827		

The average cost of treating malaria with chloroquine tablets was Uganda shillings 3,319 and 4,040 with Fansidar. The recommended first line treatment for malaria is SP + Chloroquine. This costs a patient on

average Ug Shs 5,867 per dose. The most expensive treatment cost for malaria is Ug Shs19,063 using Artemether injection. Generally the injection method of treatment is more expensive than oral form. This may be due to the skills needed, cost of the injection form of the drug and the extra materials needed for the injection to be administered. The price range for management of adult malaria is Ug Shs 3,310 to Ug Shs18,146. The average cost for patient for treatment of Hypertension and Ulcers are Ug Shs15,699 and Ug Shs12,827 respectively.

In Management of malaria various drugs can be used and these drugs have varying prices hence the type of drug used has influence on the amount charged for treatment. The respondents were asked the price of drugs used in the various disease conditions in children and the reported prices are summarized in the table below.

Table 5.3 The Average Cost of Managing the Disease Conditions for Children

Disease		Average cost (Ug.shs) per Cost of dose			
	Medicine		Tablets	Injections	Syrup
Malaria					
	Chloroquine		2284	4489	3092
	Quinine		3827	4989	3635
	Fansider		2557		3429
	Artemether		9169	11382	
	Amodiaquine		2194		4643
	Arsumax		8434		
	Metakelfin		3103	4000	
	SP+ Chloroquine		3554	2500	4500
	Primaquine		2650		
UTRI		9398			
Diarrhea		7326			

The average costs per treatment of a child suffering from uncomplicated malaria are Ug Shs2,284 for Chloroquine tabs, Ug Shs3,092 for chloroquine syrup and Ug Shs4,489 for injectable chloroquine. The most

expensive cost for malaria is Ug Shs11,382 for Artemether injection. The syrup forms are mainly used for babies and young children below 10 years of age. The injection forms are common because most people believe that the person recovers faster when given an injection. The price range for management of child malaria is 2,284 to 11,382 Uganda shillings.

The average cost per treatment of a child with URTI is Ug Shs9,398 while that for Diarrhoea is Ug Shs7,326.

On average the price for treatment of child with malaria was about 64 % of the adult price.

Consultant fee are normally charged before one sees the provider and is meant to compensate for the provider's time. The respondents were asked how much they charged for consultation and the findings were summarized by division as in the table below.

Table 5.4 Average Consultation Fee by Division

Division	Average cost
Rubaga	1,408
Nakawa	1,495
Central	5,696
Makindye	1,467
Kawempe	2,133

The practice of charging consultation fees is new in Uganda, as most clinics prefer to charge for the all treatment. The patient feel cheated if they are asked for money before seeing the clinician, therefore the providers prefer to charge them after seeing the clinician.

The average consultation fee is Ug Shs2,440 with Rubaga division having the lowest average of Ug Shs1,408 and Central division the highest at Ug Shs5,696. 30% of the clinics in Central division were charging consultation fees as compared to 7% in Rubaga division. The clinics in central division are more used to charging consultation fees because they are in a more urban setting. The people of central division are likely to be more willing to pay higher charges because they have a higher ability to pay.

5.3.1 Average Lab costs for Malaria by Division

Laboratory tests are necessary in diagnosis of malaria for the provider to be sure of the disease condition. The patients can easily confuse other fever causing conditions for malaria. In an earlier study it was found that consumers and providers share culture-specific interpretations of fever symptoms that are overlapping (CMS 2002). In Uganda whenever one gets fever, he/she associates it with malaria yet there are many diseases that can cause fever. A big number of clinics visited had their own in house laboratory. The respondents were asked how much they charged

for malaria laboratory investigations and the findings are summarized in the table below.

Table 5.5 The Average Laboratory Fee for Malaria Investigation by Division

In addition to the treatment fee, a patient has to pay for laboratory tests and in some clinics they have to pay consultation fee as well.

Division	Average cost
Rubaga	1,786
Nakawa	1,952
Central	2,600
Makindye	1,750
Kawempe	2,184

The average laboratory price is 2,054 Uganda shillings and the range for lab costs across the divisions is Ug Shs2,600-1,750

Central Division has the highest price while Makindye has lowest average price. The trend of laboratory price across the division is similar to that of consultation fees with central division having the highest price.

5.3.2 Average Salary Expenditure by Division

In a cost plus or mark up pricing strategy, the cost of overheads is a very important factor in pricing. The respondents reported the amount spent

on salaries of staff per month. The mean of reported total salary expenditure per clinic was calculated per division and the findings are summarized in the table below.

Table 5.6 Average Salary Expenditure by Division

Division	Average cost
Rubaga	240,000
Nakawa	168,889
Central	440,000
Makindye	237,500
Kawempe	250,004

The average expenditure on salary for all employees is Ug Shs267,279 per month. The range for average expenditure on salary is Ug Shs440,000 – 168,889. Central division has the highest salary and the highest prices for medical care. This is an indication that there is a relationship between salary and the price charged.

The reported overhead costs for materials like gloves, syringes, antiseptics, disinfectants, etc are summarized in the table below. The overhead costs are materials used in the provision of the services.

Table 5.7 Average of Other Overhead Costs by Division

Division	Average cost
Rubaga	70,357
Nakawa	85,882
Central	138,182
Makindye	91,667
Kawempe	128,750

The average expenditure on other overhead is Ug Shs102,968 per month. The range of the other overheads is Ug Shs138,182 – 70,357 = 67,825. Central division has the highest other overhead expenses and Nakawa has the lowest. This is line with other expenses in the divisions.

5.4.0 The Average Fixed Cost for Treating a Patient Irrespective of the Disease Condition

Average total reported number of patients = 496

Average Total overheads = 102,968 + 267,279 = 370,247

Cost allocation of overheads per patients = 370,247 / 496 = 746.5

Respondents were asked how much they charged an adult patient who presented with malaria and ulcers and the finding are summarized by division in the table below.

Table 5.8 Average Price for Treating Malaria plus Ulcers

Division	Average cost in Ug Shs
Rubaga	19,475
Nakawa	17,780
Central	26,750
Makindye	17,500
Kawempe	15,790

Co-morbidities require more medical inputs to manage therefore the price for medical care should be higher than in single disease conditions.

The findings of the study indicate that the price of treating two diseases is higher than that of each disease but lower than the two combined.

5.4.1 Average Number of Patients per Clinic by Division

The average number of patients per clinic may influence the price of medical services because a high turnover is expected to reduce the contribution per patient to fixed overheads. In setting price one needs to understand in as much detail as possible what effect it will have on levels and patterns of demand. The respondents were asked how many patients on average they saw a week and the findings by division are summarized in the table below.

Table 5.9 The Average Number of Patients Seen Per Clinic Per Month

Division	Per week	Per month
Central	174	696
Nakawa	149	596
Kawempe	111	444
Makindye	88	352
Rubaga	98	392

The range of patients in the district is 352 – 696 per clinic per month. This refers to total number of all types of patients. Central has the highest number of patients per month but still has the highest prices. This maybe an indication patient turnover is not a significant factor in setting prices in the district. The prices of drugs used in management of malaria were investigated in wholesale pharmacies in Kampala and a comparison between these prices and the prices of the drugs in the clinic were computed and summarized in the two tables below, one for adults and the other for children.

Table 5.10 Differences between Cost and Selling Prices of Drugs in Clinics for Children

Drug	Cost price Per Child Dose	Price of drug in clinic	Ratio of Selling price to cost price	Mark difference
Chloroquine Tabs	75	2,284	30.5	2,209
Chloroquine Syrup	400	3,092	7.7	2,692
Chloroquine Inj	480	4,489	11.2	4,009
Quinine Tabs	750	3,827	5.1	3,077
Quinine Syrup	1,000	3,635	3.6	2,635
Quinine Inj	1,575	4,989	3.2	3,414
Fansidar (SP)Tabs	110	2,557	23.3	2,447
Amodiaqiune Tabs	75	2,194	29.3	2,119
Amodiaquine Syr	1,000	4,643	4.6	3,643
Arsumax	7,000	8,434	1.2	1,434
Metakelfin	1,000	3,103	3.1	2,103
Artemether Tab	6,000	9,169	1.5	3,169
Artemether Inj	8,000	11,382	1.4	3,382
Primaquine	280	2,650	9.5	2,370
SP + Chloroquine	185	3,554	19.2	3,369

The table shows that the selling price of malaria drugs for children is 1.2 to 30.5 times the cost price. The mark up varies between Ug Shs1,434 and Ug Shs 4,009 per dose.

TABLE 5.11 Differences Between Cost And Selling Prices Of Drugs In Clinics For Adults

Drug	Per Adult Dose	Price of the drug in a clinic	Ratio of selling price to cost price	Difference between selling and cost price
Chloroquine Tabs	150	3,319	22.1	3,169
Chloroquine Inj	960	6,730	7.0	5,770
Quinine Tabs	1,500	5,006	3.3	3,506
Quinine Inj	3,150	7,544	2.4	4,394
Fansidar (SP) Tabs	165	4,040	24.5	3,875
Amodiaqiune Tabs	150	3,541	23.6	3,391
Arsumax	13,000	18,146	1.4	5,146
Metakelfin	1,600	5,912	3.7	4,312
Artemether Tab	11,000	17,037	1.6	6,037
Artemether Inj	15,500	19,063	1.2	3,563
Primaquine	560	3,310	5.9	2,750
SP + Chloroquine	325	5,867	18.1	5,542

The table shows that the selling price of malaria drugs for adults is 1.2 to 24.5 times the cost price. The mark up varies between Ug Shs2,750 and Ug Shs 5,770 per dose.

The above prices of anti-malarial drugs in wholesale pharmacies indicates that the providers are adding exorbitant marks ups on drugs. Some of the prices indicate that the providers are charging the patients more than ten times the cost of the drug. In the study in the private sector, it was found that cost is a crucial determinant of the choice of the drug and amount of medicine bought (CMS 2002). Consumers have to choose drugs, which they can afford, and in an amount they can afford.

5.5.0 Price Discrimination

Price discrimination is the practice of charging different prices to different people with the same condition. Price discrimination is common practice in health care services. Some people defend it by saying that it is fair to charge the rich more and make it affordable for the poor. In a study by the Governance Institute 86% of the respondents said that they provide a means for low or no income patients to receive care at reduced rates. 84% of the respondents reported practicing price discrimination or differential pricing. Most of respondents admitted to practicing price discrimination based on income status.

5.6 Problems Encountered by Providers

The respondents reported a number of problems encountered during pricing. They reported that some patients are too poor hence could not afford to pay for the services.

The high prices turned away their potential clients and hence low turnover. The respondents reported that the patients regularly complain about the high charges for medical services.

The respondents reported that high costs and competition made it difficult for them to charge low prices.

The respondents also reported that the free treatment offered by government make patients expect low prices in the private sector.

When asked whether they offered credit, 74% of the respondents reported to be offering credit to their clients.

95.9% of the respondents reported that some of the patients do pay the debts owed to the clinics.

When asked what they would do if a patient could not afford to pay for the services offered in the clinic, the respondents gave various options;

- Refer them to the government hospitals or cheaper clinics.
- Reduce the price
- Give the drugs according to the money the patient has (partial treatment)
- Persuade them to raise the money
- Offer credit
- They do not get treatment
- Prescribe an alternative and cheaper medication

5.7 Reduction of Prices for the Poor

76% of the respondents said that they reduce the prices for the poor patients.

When asked how they would tell that one is poor, they cited the following methods;

- By looks ie appearance,
- Through conversation and history telling,
- When they fail to pay for the treatment.

This was an indication of price discrimination and it confirmed the earlier question about price discrimination.

5.8.0 Drugs in Clinics

The concept of separation of dispensing from medical practice is that physicians take charge of diagnosis and treatment of patients, while pharmacists are engaged exclusively in dispensing and medication counseling according to the prescriptions issued by the physicians. This separation is necessary for qualitative improvements in the national medical services.

When asked whether they dispense drugs, 89% of the respondents said that they dispense drugs in the clinic.

The respondents reported obtaining the drugs from wholesale pharmacies.

When asked whether they inform patients about the cost of the drugs, 79% of the respondents reported that they do not inform the patients about the cost of the drugs but only include then in the final price for treatment. In a study on hospitals by Governance institute about half of the respondents would make their prices readily available to the public. Most of the respondents said that patients sometimes fail to pay for the services because they cannot afford the price.

5.9.0 Competition

When making pricing decisions the need to understand competitors' cost levels and their likely patterns of price behaviour is particularly important. In an earlier study it found that over 43% of the respondents considered competitor prices to be significant when setting their own prices (Governance Institute 2003). 55% of these positioned their prices in the middle of the market, 5% tried to be the highest in the market, 10% tried to be the lowest, and 19% positioned their prices just below a certain competitor.

When asked if they faced competition, 98% of the respondents acknowledged the presence of competition.

When asked whether competition had any effect on the prices they charged, 62.6% of the respondents said that competition had an effect on the prices they charged the patients. The respondents reported the

distance to the nearest clinic and the findings by division are summarized in the table below.

Table 5.12 Average Distance between Clinics

Division	Distance in meters
Rubaga	194
Nakawa	178.6
Central	213.5
Makindye	211
Kawempe	116.6

They respondents were asked about distance to the nearest clinic, which was used as a proxy for the competition. When asked about how they react to competition, the respondents cited a number of things they do; Reducing prices, Giving credit, Offering affordable prices, Not charging consultancy fees, Doing nothing.

The frequencies of the various methods cited by the respondents were complied. Reducing of prices came as the most frequently used method for fighting competition. Doing nothing was next to reduction of prices, which may be an induction that competition is not so much in this area. The methods used in reaction to competition are summarized in the pie chart below.

Figure 5.1 Reaction to Competition

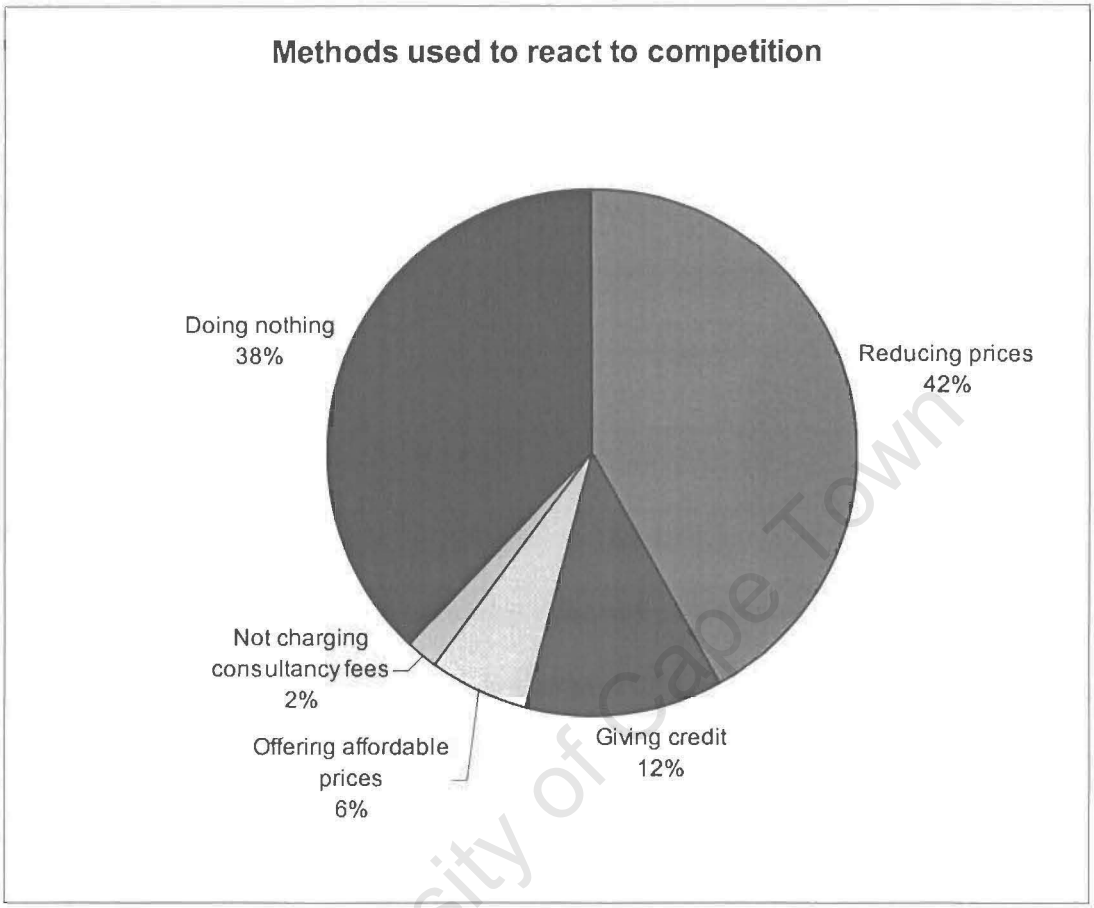


Table 5.14 Results from Regression analysis

Price for treating:	Avg Patients per week	Avg Patients per week for condition	Rent	Variable Cost	Distance to nearest clinic	R^2	Prob > F	Sample size
Malaria (adult)	-4.40	-50.65	0.011*	2089.30**	0.34	0.84	<0.0001	80
Malaria (children)	-5.32	-4.062	0.013**	537.34**	0.11	0.42	<0.0001	80
Hypertension	17.829	1687.46***	0.008*	2967.048	5.707	0.4674	<0.0001	63
URTI	10.11	40.134	0.0312***	2698.80*	-4.39	0.4594	<0.0001	78
Ulcer	4.136	-477.89	0.076***	1155.97	8.712	0.436	<0.0001	76
Diarrhoea	-7.89	-74.69	0.0405***	381.32	0.568	0.666	<0.0001	79

* = significant at 10% level ** = significant at 5% level *** = significant at 1% level

5.10 Regression Analysis

One of the objectives of the study was to determine the effect of each of the factors on the price of medical services. Regression analysis technique was used to determine the effect of each of the factors on the prices charged for medical services. A multi linear regression analysis was run on the data for the six disease conditions. The following R-squared values were got; malaria-adult-0.82, malaria-children-0.42, hypertension-0.4674, URTI-0.459, ulcers-0.436, diarrhoea-0.666. The R squared indicates the proportion of the variation of "price for treatment" that is explained by the independent variables. The regression analysis results indicate that variable cost and rent are significant factors in price of management of malaria both in adults and children. Rent is also significant at 10% level in the management of hypertension. Rent is significant in management of upper respiratory tract infection (URTI), diarrhoea and Ulcers but at 1% level of significance. Variable costs are also a significant factor at 10% level of significance in the management of URTI. The distance to the nearest clinic was found not be a significant for any of the disease conditions. The average number of patients seen per week was found not to have an effect on the price of medical care during the study. The signs for the coefficients were negative indicating as expected in the model but the factor was not significant. These may be due to the fact that numbers are not big enough to have effect on the

price. The type and cost of drugs used in the management of any disease condition was reported as one of the factors that influence the price but it was not included in the model because cost of drugs is a direct input in the price. In more developed countries, drugs are normally bought from the pharmacy and not directly supplied and charged in clinics.

5.11 Summary of Findings

The findings of the regression and the descriptive statistics all indicate that certain factors influence the price of medical services. The descriptive statistics indicate that factors like rent, variable costs (salaries and other cost), competition and drugs affect the price of medical services. The regression analysis indicates that rent is a significant factor across all diseases. The rent may be used as a proxy for location as normally the rent is higher in urban and business areas. This is in line with the descriptive statistics, which indicate that rent is higher in central division and the price is also higher there. The regression analysis also indicates drugs as being significant. The regression analysis shows distance to the nearest clinic as not being a significant factor in the price of medical services. This should be an indication that competition is not much in the district since distance to the nearest clinic was used as a proxy for competition. The reason for this should be the presence of many clinics but of different categories like doctor's, nurse's, medical assistant's, midwives', etc. When asked what they do to

counter competition a big number of providers reported that they do nothing which further reaffirms the fact that competition is actually not a threat. The regression analysis also indicators that the average number of patients seen per week does not have a significant effect the price of medical services. This may be due to the low competition and/or lack of proper accounting skills.

CHAPTER 6

6.0. Discussion of Results, Policy Consideration and Conclusion

6.1.0 Summary of the Results

From the study, medical care prices are set independently by clinics but usually without recourse to standard accounting guidelines. The rate is exclusively the preserve of the proprietor and is guided by what is considered adequate recovery for services rendered, as well as the customary fee charged by other providers within the locality. Expectedly, variations in price of services existed across the divisions. Many providers in the district were practicing Price discrimination. The providers were charging different prices for the same service to different people. As Bennett et al. (1994) observed, unethical practices among providers are particularly likely to thrive in such a scenario dominated by solo practitioners. This is attributed to the fact that normally in solo practices, accounting principles can be changed easily by one person while as in group practices there are normally set guidelines to ensure uniformity.

The providers attributed the high prices to the high costs of medical inputs especially drugs which are largely imported. The contentious issue, however, remains the extent to which current prices reflect the actual costs of producing services within the system. In other words, are

consumers of health care presently receiving value for money or are they, in fact, subsidizing an inefficient supply process? Wouters (1993), for instance, high levels of technical inefficiency have been observed among health care providers in Ogun state in Nigeria.

This study aimed to achieve several objectives. First the study sought to identify factor that influence price of medical services. The findings in chapter five have indicated that the cost of drugs given to patients, other overheads that the health facility incurs, type of disease, income status of the patient, type of drugs given, the dosage form of the drug given and the need to make profit have direct influence on prices of medical services. The study has also shown that providers charge different prices for the same services to different people. This is one of the characteristics of the medical markets first noted by economists (Kessel 1958). The price discrimination reflects providers' behaviour for increasing their net revenues.

In the medical profession, medical practitioners are required to take the Hippocratic Oath that requires them to put the patient needs before personal gains. This oath prevents the medical practitioners from putting personal gains before the patients needs and hence it makes difficult for the providers to indicate profit as a factor in pricing but it is important to note that private for profit providers are in the business to provide services and make money.

The time spent with a patient was not mentioned at all during the study indicating that the time spent with the patient is not a factor in determining the price of medical services in a private clinic in Kampala. In a service industry time is usually an important factor in setting prices but in the case of health care in Kampala it was not factor. This should be due to the fact the providers charge for their time indirectly through consultation fee and high mark ups on drugs. They also charge for investigations like laboratory tests. Charging per time spent would also lead patients to give limited information as way of minimizing the cost for medical care, which in turn could lead to poor diagnosis and management of disease conditions. This is in agreement with the practice of medicine in many countries were the patient pays a fixed consultation fee before going in to see the provider.

6.1.1 Price of Healthcare

The average number of patients per clinic in Kampala is 496 of which 54% are malaria patients. This indicates that malaria is the most prevalent disease condition managed by these clinics. The price for management of malaria ranges from Ug Shs3,310 to Ug Shs18,146 for adult and Ug Shs2,284 to Ug Shs11,382 shillings for a child. This cost varies depending on the type of drug, the dosage form of drug used and other overhead costs in the treatment of the malaria. The average number of patients seen per week had no influence on the price being

charged. On average, the price of a treating a child with malaria is 64% of the adult price. This difference is mainly due to the dosage of the drugs used in management of child cases. Generally the dose of a child is a half that of an adult.

In addition to the prices charged to the patient for treatment, they had to pay consultation and laboratory fees. The consultation fees ranged from 1,408 to 5,696 shillings and the laboratory fees ranged from 1,750 to 2,600 shillings. The consultation fee was optional in some clinics and was more common in the central division. Most clinics surveyed had laboratory facilities within the clinic. This was another source of income to the clinic.

6.1.2 Drugs

Most of the clinics did stock and dispense drugs. Where they stocked drugs, there was a tendency to put high mark-up. The mark-ups on drugs were found to be very high. According to the World Health Organisation (WHO 1999), providers are more likely to over prescribe when they stock drugs. The patients trust the providers to give them the best options and are not in position to discuss with the providers about their decision. This raises concern about affordability and availability of the treatment. The providers did not inform the patients about the type and cost of drugs given. The patients are not in position to compare the prices of the drugs given in other outlets like pharmacies or other clinics.

This calls for policies that empower the patients and also ensure rational drug use by the providers.

6.1.3 Price Discrimination

The patient was being given a general bill at the end after receiving part of the treatment. The willingness and ability to pay would determine how many drugs one could carry home. The high levels of price discrimination in the clinics exemplified this.

If a patient could not afford then the providers would reduce the price, offer credit, give a few drugs or refer the patient to the government facilities. The absence of prepayment methods meant that patients had to pay out of pocket therefore if you fell sick when you did not have money that day most likely you would not get proper treatment. Providers helped patients who could not afford to pay for the full treatment by supplying partial dosage. The supply of partial dosage appears cheap to the patient but may lead to other problems like drug resistance and relapses because the patients often do not come back for the remaining dose especially when they feel better.

6.1.4 Competition

One of the factors that were reported to influence the amount charged per patient was competition. The survey revealed that there was competition and a number of providers cited that they had reacted to competition by reducing prices, giving credit or not charging consultation

fee. Price is an important factor in determining where one seeks treatment especially in poor communities. Reduction in prices would ensure that those who cannot afford can get some care and may create customer loyalty. When dealing with people with low and irregular incomes, offering of credit ensures that the people can get treatment but in turn creates customer loyalty since the patient are sure that they can run to a provider in times of need. Offering credit is helpful when one has no money at that moment but it can also lead to loss of clients. Those who fail to pay will not return and next time they will go to another clinic. A number of providers reported that the patients sometimes failed to pay debts and the providers lost money. If the distance between clinics is taken as proxy measure of competition, then according to the survey, Kawempe division had the highest competition and the central division had the lowest competition. The regression analysis showed that competition was not a significant factor in determining price for medical care. This may be attributed to the fact that in health care sometimes providers react to competition by oversupply and /or investing in technology.

6.1.5 Overheads

The other factor which influenced the price of health care was the amount of other overheads like salary, rent, etc that are incurred by the clinic. The study indicated that prices differ from division to division, and that patient turnover also differed from division to division. The prices for

medical care were highest in the central division (which has the main business area). The central division had the highest overhead costs compared to the other divisions. In conventional accounting, prices are expected to be lower if the turnover is high because the contribution per person to fixed overheads is less, but in this case central division has both the highest patient turnover and prices. This maybe explained by the high overhead costs and the generally wealthier patients in the central division.

6.1.6 Significance of Factors

The other objective of the study was to determine the effect of each of the factors on the price of healthcare. Drugs are the biggest contributor to the price of health care in Kampala. Most of the providers reported dispensing drugs in their clinics.

One of the reasons clinics give for stocking drugs was that it helps them to serve their clients at one spot rather than only prescribing and sending them to pharmacies for the drugs. This may sound convincing but this may tempt them to over prescribe for financial gains as was observed by Kapril (1998), and Morton (1993).

Rent was found to be a significant factor in the determination of prices of health care in clinics. This could be due to the fact rent can be used as proxy measure for location and hence an indication of willingness and ability to pay by the people in that location. The willingness and ability to

pay by the people served by the clinic will have an influence on the prices charged.

Most studies on factors influencing price health care have been done in developed countries with prepayment/insurance schemes, but this study shows what one would expect in Sub Saharan Africa in general and Uganda in particular. It is hoped that it will be useful for those who want to do similar studies in other developing countries.

6.2.0 Policy Recommendation

It is apparent, however, that the inadequacies in the nation's health care system cannot be redressed simply by promoting private financing or private provision of services since market forces do not necessarily promote efficiency (Ginzberg 1995). Moreover, an expanded private health care market could overwhelm existing regulatory capacity and make quality control increasingly difficult, unless bold steps are taken to restructure the market. Reforms that focus on minimizing waste in the supply of services become inescapable if essential medical care is to be made more affordable and accessible to large segments of the population. As seen from the study findings, most factors that influenced prices of medical services are characteristic of market forces, which work under perfect competition. But as observed in chapter 2, health services do not comply with perfect competition, therefore policy makers should find

ways of intervening to prevent medical services supply from playing to the whims of market forces

The national drug policy and various health professional practice laws have some regulations that are aimed at controlling prices indirectly and improve availability, but these need to be strengthened. The national drug policy and health professionals practice laws discourage clinics from stock piling drugs and the professional practice statutes call for ethical practice.

6.2.1 Control of Drug Prices

Results in chapter five indicated drugs are biggest contributor to the price charged for medical services, the national drug policy recognizes that drugs are vital component in supply of healthcare supplies and tries to improve affordability by promoting and insisting that all drugs imported in the country are of generic origin unless no satisfactory non-proprietary alternative exists (NDP 1993). The national drug policy also calls for prescription using names and allows generic substitution were necessary.

However, most prescribers put very high margins and end up making the drugs unaffordable (Seru 2003). Therefore a number of policies need to be put in place or enforced to improve the affordability of drugs and hence medical care.

6.2.2 Separation of Dispensing from Prescribing

The type of prescibers officially allowed by the 1996 Professional Practice Statutes include; medical officers, dentists, midwives, nurses and allied professionals (medical assistants, orthopedic assistants, ophthalmic assistants, psychiatric clinical officers, etc). Starting January 2004 nurses and allied health professionals were allowed to start private practice hence the number and category of private clinics is expected to drastically increase. In regard to the above it is recommended that there should be separation of dispensing from prescribing. Government should ensure that clinics only stock emergency drugs and for the rest they should write prescriptions for the patients. This will ensure that there is no over supply and over charging of patients by providers in clinics. The reason for allowing clinics to dispense has been often cited as absence of pharmacies, but Kampala district has an adequate number of pharmacies. However it has been documented that clinicians dispense drugs to their patients partly as a service, but also because they have learned that patients are often much more willing to pay for drugs than simply for consultation. In some countries, general practitioners derive 60% of their income from the drugs they dispense. This creates an obvious and measurable incentive to over prescribe (Kapril 1988; Mortin-Jones 1993).

Allowing clinicians to dispense creates strong incentives to over prescribe.

Where dispensing in clinics is allowed for absence of adequate pharmaceutical services, the dispensing clinicians should sell drugs at cost and not for profit.

6.2.3 Control of Competition

In order to improve availability (geographical access) and control competition, licensing conditions should aim at encouraging better geographical distribution of clinics by specifying minimum distances between clinics. In health care, competition sometimes lead to over supply of services through use of excess technology as a way of beating the competitors. The availability of such hardware has invariably come to be regarded as a quality index by clients. Such demand preferences have intensified the kind of competition which Light (1991) contends encourages 'duplication before rationalisation' and invariably results in over-servicing, over-hiring and over-marketing. This is not yet a problem in Kampala but it would be important to put in place policies, which prevent it before it happens. Policy makers should consider licensing clinics according to the population to be served. Other methods that can be used to improve geographical distribution of clinics are tax reductions for providing services in specified areas of the country and other financial incentives (WHO 1997).

6.2.4 Direct Control of Prices

Direct control of prices is another method that can be used to control prices. This can be done in various ways;

Fixing Prices

The government or professional councils can set limits beyond which one cannot exceed for consultation fee and management of certain common conditions like malaria.

Price information;

The government should endeavor to give complete, accurate and up to date information on drug prices to policy makers, health professionals, people in the drug distribution chain and consumers. When they have information about drug prices and especially of generic drugs, consumers can exert pressure on prescribers and dispensers to control price. (WHO/DAP/97.12)

Price information can be communicated to stake holders through;

- Listing of prices or relative price information in therapeutics manuals (eg like in the British national formulary)

-Listing of price information in pharmacies eg The Philippines

-Printing retail prices on drug packages

-Regular publications of pharmaceutical prices guide or manual (eg Colombia)

-Publication of selected pharmaceutical prices in local newspapers or other media (eg Argentina)

Pharmaceutical price index based on the same principle as consumer price indices for monitoring inflation is one approach to making such comparisons. WHO has described such a method for calculating the value a "basket of drugs " (Brudon-Jakobowicz et al 1994)

The government and the professional councils need to sensitize the public about paying consultation fees so that these are not incorporated in drug costs.

It is advisable that before policy makers decide on which price control mechanism to adopt they should seek more information on issues like, change in prescribers and consumers behaviour in the face of price control.

They should also explore the potential risks of price regulation. Because if prices are set at less than competitive prices, there is likely to be a lot of pressure from the powerful providers in the health sector. Alternatively prices could be set too high, further reducing affordability. Most importantly, policy makers should also bear in mind that price regulation may have unintended consequences. It is important therefore, to evaluate carefully the economic reasoning behind price regulation policies and to anticipate the economic responses of producers, distributors, and consumers (WHO/DAP/97.2)

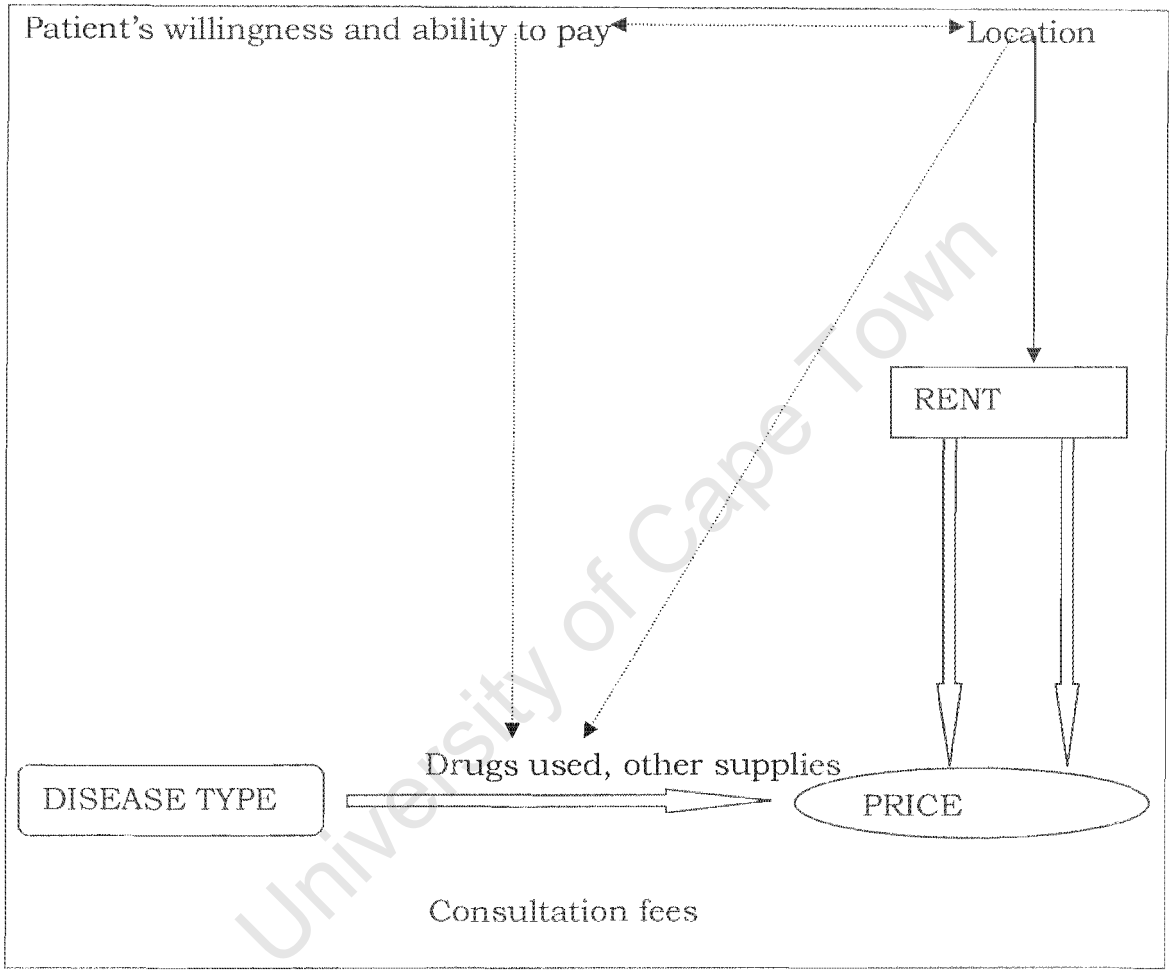
6.2.5. Other Methods of Improving Affordability

To further improve affordability policy makers should look at the possibilities and feasibility of introducing health-financing schemes, such as pre-payment and health insurance schemes.

The need for healthcare often cannot be predicted. This makes it difficult to plan household budgets so as to take account of them. Financing schemes may make healthcare more affordable. Insurance schemes may also have a critical impact on health seeking behaviour through the payment mechanism they use. Prospective forms of payment (such as capitation, or case-based payments) fix in advance the total amount paid to the provider and therefore it is not in the interest of the provider to prescribe unnecessary drugs. In contrast fee- for service type of payment encourage over supply of medical services (Grabowski H and Mullins 1997).

Therefore it is important for policy makers to critically analyse all the payment mechanism available before they commit them selves to any. The creation of prepayment schemes will create powerful buyers who can counter the power of the providers.

6.3 Framework For Determining Price Of Medical Services in a Developing Country



This framework has been designed by the researcher to explain how prices of medical services are determined in a fee for service-out of pocket payment reimbursement environment in a developing country.

The price of medical services is directly influence by the rent but the rent is dependant on the location of the clinic. Locations in the major

business areas are normally higher than those in suburbs. The drugs and other sundries used are direct inputs in the price charged, but these are influenced by the disease condition and the willingness to pay of the patients. Since the type of payments is predominantly out of pocket payment, the ability and willingness to pay of the patient or the payer may determine the type of drugs used. For instance there are many drugs used for management of malaria, but the choice of one to use may be influenced by the ability and willingness of one to pay. Where consultation fees are charged, they are a direct input into the price of medical care. The patient's willingness and ability to pay may influence the location of the clinic, as a provider would be interested in providing timely services. The presence of people with the willingness and ability to pay may influence the location of the clinic. In economics to important for one to locate a service where there is demand for the service. People may also be willing to higher fees for services in certain location. The location of the clinic has an effect on whether consultation fees are charged. This was seen during study that most clinics which charged consultation fees where in central division. This may also be an indication of ability and willingness to pay by the patients.

6.4 The Way Forward

It is difficult for Government to operationalise the above recommendation through private sector, whose major objective is to make profits. But most of these recommendations can be realised through the use of autonomous bodies in which government has interests. In Uganda there are health professional councils, which are charged with the regulation of the private practices for their members and the National Drug Authority (NDA) responsibly for regulating the use of drugs. The professional councils need to be financed and strengthened to ensure that they have adequate capacity for regulation. Effective monitoring remains the key to achieving quality and affordable services by the private sector. Regulatory bodies therefore need to be adequately equipped in terms of technical personnel and information technology.

The decentralization of complaints and disciplinary processes in professional practice is necessary for effective control of the private sector.

There is also need to control the market in terms of distribution of health care providers, scope of clinical services delivered by various categories of providers, the quality and cost of care. Group practices could be encouraged in view of the potential for higher productivity, economies of scale and better quality of care. The group practices have better management systems that encourage transparency and ensure ethical practice. Government should create incentives like loans for group

practices and also introduction of health insurance will encourage providers to team up in order be more competitive. Non-governmental organizations like Uganda Program for Human and Holistic Development (UPHOLD) should assist providers to form group practices.

National Drug Authority by nature of the power given to it by the National Drug Policy and Authority Statute 1993 should be able to handle the regulatory mechanisms recommended. However it is important to impart legal, conceptual and political skills to the employees of NDA if they are to manage the regulatory system effectively. Secondly the institution needs an effective legal system to take sanctions against organisations/individuals, it also needs to maintain high ethical standards especially in the inspection unit. Terms of service and ethical practices that encourage reliable inspection and avoid illegal payments should be instituted.

The absence of versatile consumerism has served to reinforce inefficient practices within the private sector. The government should take deliberate steps to encourage consumer organisations. This will help create strong buyers and hence provide a check on the health providers. Introduction of health insurance will create opportunities for effective control of the quality and cost of care. However, designing schemes that are affordable and adequately safeguard the economic interests of dominant professional groups within the health sector remains a major

challenge.

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Appendix 1

PRICING OF TREATMENT IN UGANDA QUESTIONNAIRE

Note: Interviewers should speak to the health-worker in-charge.

Hello, my name is _____I work for an organization carrying out a study on health issues in Uganda. I would like to ask you some questions. We simply want to learn more about pricing treatment in Uganda. Your answers to these questions will be kept strictly confidential so that no one will know how you answered. The interview will last about 30 minutes. If you accept, I would like to start. Thank you.		
1. Name of interviewer: _____ Date: _____		
2. Rank/qualification of respondent: _____		
3. District	Rubaga	1
	Nakawa	2
	Central	3
	Makindye	4
	Kawempe	5
4. Health Clinic Name: _____Parish _____		

5. ARE YOU THE OWNER OF THIS FACILITY?	1. Yes (go to 7) 2. No

6. If not owner in QN 5 above, what is the qualification of the owner of this facility?	
7. Is this facility registered by the Ministry of Health?	1. Yes 2. No
8. What is the average number of patients you see in a day?	
9. What is the average number of patients who come to your facility for your services per week?	
10. What are the factors that influence the charges for treatment?	
11. When does a patient pay for medical care before or after treatment?	1. Before treatment 2. After treatment 3. Medical scheme 4. Other(specify)
12. What are the most common illnesses that you receive clients for at your facility? (Multiple responses possible)	

13. How much do you charge an adult suffering from malaria?	GO TO TABLE- ADULT'S SECTION
14. What is the contribution of each of these factors to the price? (Fill in table)	[ ] Consultation (How much?) [ ]Lab tests (How much) [ ]Specify other charges (How much))
15. How much do you charge for a child suffering from malaria?	GO TO TABLE- CHILDREN'S SECTION
16. What is the contribution of each of these factors to the price? (Fill in table)	[ ] Consultation (How much?) [ ]Lab tests (How much) [ ]Specify other charges (How much)
17. On average, how many people a week do you see with malaria?	Adults_____ Children_____
18. How much do you charge an adult suffering from hypertension?	
19. What is the contribution of each of the factors that influence the price? (Fill in table)	[ ] Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
20. On average, how many people a week do you see with hypertension?	

21. How much do you charge a child suffering from an URTI?	
22. What is the contribution of each of the factors that influence the price? (Fill in table)	[ ]Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
23. On average, how many children a week do you see with URTIs?	
24. What is the contribution of each of the factors that influence the price? (Fill in table)	[ ]Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
25. How much do you charge an adult suffering from ulcers?	
26. What is the contribution of each of the factors that influence the price? (Fill in table)	[ ]Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
27. On average, how many people a week do you see with ulcers?	
28. How much do you charge a child suffering from Diarrhea?	

29. What is the contribution of each of the factor that influence price? (Fill in table)	[ ]Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
30. On average, how many children a week do you see with Diarrhea?	
31. What are the compulsory charges that the patients who come to your facility have to pay for?	[ ]Consultation (How much?) [ ]Drugs (How much) [ ]Lab tests (How much) [ ]Specify other charges (How much)
32. How much do charge an adult who comes with Malaria plus and ulcers?	
33. Do patients pay when they come back for review?	
34. If yes how much?	
35. Do ever charge different prices for the same disease to different people?	1. Yes 2. No
36. What problems do you encounter when setting prices?	

37. On average how much do you make in profits on a monthly basis?	
38. How much do you pay in rent per month?	
39. How much do you pay in salaries per month?	
40. Are you the owner of this clinic?	1. Yes 2. No (go to 43)
41. Do you pay salary to yourself?	1. Yes 2. No (go to 43)
42. If yes, how much?	
43. Any other costs per month? For syringes, gloves, cotton wool etc	
44. Do you offer credit facilities in you facility?	1. Yes 2. No
45. If yes for how long?	
46. Do patients ever fail to pay because they cannot afford the price?	1. Always 2. Sometimes 3. Never

47. Do some of your clients fail to come back because they cannot afford to pay or still have a debt?	
48. On average, about how much do you lose in bad debts per month?	
49. What do you do if a patient cannot afford to pay for the medical services?	
50. Do you have a health insurance scheme system in place for clients?	
51. Do you think health insurance can help improve access to medical services?	
52. Do you ever reduce prices for the poor people?	
53. How do you decide that one is poor?	

54. What are the problems that you do face in your facility?	Non-payment of credit Few clients Inconsistent staff High rent charges Competition Taxes Other
55. Do you dispense drugs in your clinic?	1. Yes 2. No
56. Do inform the patient about the cost of the drugs?	
57. Where do you normally purchase your drugs?	Wholesalers Retailers Govt stores Other(specify)
58. How many hours is your facility open?	
59. Do you face competition in this area of business?	
60. How far away is the nearest clinic to yours?	

61. Does competition have any effect on the prices you charge?	1. Yes 2. No
62. If yes, how do you keep up with competition?	
63. Would you be willing to be paid fixed fee per period in advance by your patients?	

THANK YOU VERY MUCH!

APPENDIX 2

CONSENT FORM

PURPOSE OF THE STUDY

I am inviting you to take part in a study, which is being conducted as part of a masters dissertation at the Health Economic Unit, School of Public Health and Family Medicines of the University of Cape Town. The main purpose of the study is to understand the factors that influence the pricing of medical care in a private clinic in Kampala. A random sample of clinics in this division to take part in this study was done and your clinic happened to be one of those selected. We hope that the results of this study will be used to improve the prices of medical care and hence improve access to medical care.

PROCEDURE

If you agree to take part in this study, one of our trained staff will interview you. The interview will be about half an hour long and you will be asked questions on how determine what to charge per patient. You can choose not to answer any questions you do not want to answer.

RISKS/DISCONFORTS

You will not be exposed to any physical danger when you take part in this study. However, there is the inconvenience of the interview taking half an hour of your time, you being asked private questions on your pricing behavior, and expenditures on certain items. If at any time you do not want to answer any question you are not obliged to do so.

BENEFITS

Your participation in this study will help improve the understanding about prices of medical care and the information may be in designing ways of pricing healthcare to make it more accessible and affordable to people who need them.

CONFIDENTIALITY

The information you give us will be kept confidential. The information will be kept in a locked file cabinet and will only be available to the researcher. The questionnaires will be destroyed after we have worked with them. The name of the clinic or your name will not appear anywhere in the report.

VOLUNTARINESS AND RIGHT TO WITHDRAW

Your participation is completely voluntary. You can ask questions on anything that you don't understand. You have the right to withdraw from the study at any time, or to decline to answer any question. If you decide not to take part in this study, your decision will not affect your relationship with the interviewers.

If you want to talk to any one about this study, you should contact the leader, Mr. James Batuka P.O.BOX 28330 Kampala. You can also call him on 078-404057 or e-mail to btkjam001@mail.uct.ac.za

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I have read the consent form and hereby agree to take part in this research.

Name _____

Signature: _____

Date: _____