

**COST AND QUALITY OF HEALTHCARE SERVICES PROVIDED TO
URBAN REFUGEES THROUGH IN-HOUSE AND OUTSOURCED HEALTH
FACILITIES IN NAIROBI, KENYA**

BY

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DECLARATION

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DEDICATION

To my parents Mr and Mrs Kamau, and my children Anne and Eric Kamau.

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OPERATIONAL DEFINITIONS OF KEY CONCEPTS AND TERMS

Average cost: Total cost divided by services volumes (number of patients over the period the cost is incurred)

Cost: Value of resources used to produce a service or a program needed to care for patients

Direct medical cost: Value of resources that are clearly and directly associated or traced to a service e.g. drugs, laboratory test

Effectiveness: Degree to which processes result in desired outcome through evidence-based practices.

Equity is the extent to which the system deals fairly with all clients.

Efficiency refers to systems optimal use of available resources to yield maximum benefits.

In-house: Something done or operated internally rather than obtained from a third party or outside source.

Outsourcing: The process of entering into a contractual agreement with another facility concerning service provision.

Overhead costs: The indirect cost or fixed expenses of operating a business. Not directly related to the actual production of the service e.g. rent and administrative costs

Patient centeredness: Degree to which a system functions by placing the patient at the centre of its delivery of care

Patient safety: Degree to which healthcare processes avoid adverse outcomes or injury to clients

Quality of healthcare is the extent to which healthcare services produces the desired outcome

Timeliness: Degree to which patients obtain care promptly, less waiting and service time.

Urban Refugee: A refugee who decides or was obliged for some reason to settle in an urban area of the country where they found asylum rather than in a camp-based settlement.

ABBREVIATIONS AND ACRONYMS

AHRQ	Agency for Healthcare Research and Quality
CBA	Cost Benefit Analysis
CEA	Cost Effectiveness Analysis
CMA	Cost Minimisation Analysis
CUA	Cost Utility Analysis
DALY	Disability Adjusted Life Years
DIWOPA	Divine Word Parish
HCQI	Health Care Quality Indicators
OECD	Organization for Economic Cooperation and Development
QALY	Quality-Adjusted Life Years
RP	RefugePoint
SPSS	Statistical Package for the Social Scientists
UNHCR	United Nations High Commissioner for Refugees

ABSTRACT

More than half of the world's refugees reside in non-camp settings, In Nairobi, approximately 55,000 refugees had been registered with United Nations High Commission for Refugees by end of 2012 (UNHCR, 2013). In recent years the UNHCR has documented a trend towards a growing number of refugees and asylum seekers residing in urban areas. Refugees in urban areas often face numerous problems limiting them from accessing the already overstretched government health services. Most urban refugees do not have a reliable source of income and hence cannot afford to pay for healthcare services. In Nairobi, healthcare for urban refugees is provided using donor funds through two main models: In-house health facility set up to provide healthcare services exclusively for urban refugees and through outsourcing from mainly existing faith based health facilities where refugees are treated and the costs passed to humanitarian organizations for settlement. Despite the increasing humanitarian crisis in Africa, there is shrinking humanitarian resources hence overstressing the already limited donor funds. There is need therefore to use the available donor funds in the most cost efficient way and ensure quality healthcare services. The main objective of this study is to determine and compare the cost and quality of healthcare services between in-house and outsourcing healthcare among urban refugees in Nairobi Kenya. The study employed a descriptive cross sectional design. Purposive sampling method was used to select the two facilities. Structured questionnaires were administered as exit interviews on refugee patients who were treated at the two facilities with the selected five common illnesses. The quality data was analysed using SPSS version 20 and cost data using excel 2007. The direct medical cost was at an average of Kshs 130.1 per patient at the in-house facility and Kshs 588.02 per patient at the outsourced facility. The overhead costs were at an average of Kshs 800 pp and Kshs 349 pp respectively. Total average cost was Kshs 930.1 per patient at in-house and kshs 937.02 per patient at outsourced facility. The quality of care indicators, clinician's understanding of patients problems was statistically significant ($\chi^2(1) = 7.635, p = .006$) patients being allowed to ask questions about their health was significant ($\chi^2(1) = 38.019, p = .000$), patient being examined physically was statistically significant ($\chi^2(1) = 126.95, p = .000$), drugs well utilized was also significant at ($\chi^2(1) = 36.837, p = .000$). Laboratory utilization was higher at the outsourced facility compared to the in-house facility was significant ($\chi^2(1) = 23.214, p = .000$). Comparing the cost at the two facilities, the direct medical cost was significantly different with in-house being the cheaper model (t-test = 27.639, df 302.290 and p = .000) however with additional overhead costs, there was no significant difference in cost (t-test = -.346, df 302.290 and p = 0.729). Comparing quality of care, the results was subjected to a quality index measure. The in-house facility scored 87.53% while the outsourced facility scored 73.99% hence there was better quality of care at in-house facility compared to the outsourced centre. The study therefore recommends that the in-house model looks for ways of reducing their overhead costs (rent and salaries) since the direct average cost was significantly lower, with lower overhead costs, then the total average costs would be lower. The facility should also increase laboratory utilization (evidence based practices) since it scored high on all other quality measures apart from laboratory utilization.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

More than half of the world's refugees now reside in non-camp settings, in recent years the United Nations High Commissioner for Refugees has documented a trend towards a growing number of refugees and asylum seekers residing in urban areas. Approximately 12 to 27 percent of refugees in Kenya live in urban settings, primarily in Nairobi (Pavanello et al, 2010). In Nairobi approximately 55,000 refugees had been registered by October 2011 (UNHCR, 2011).

Article 23 of the Refugee Convention of 1951 stipulates that refugees should enjoy access to health services equivalent to that of the host population. According to Article 12, International Covenant on Economic Social and Cultural Rights, 1966, everyone has the right to the highest standards of physical and mental health. In Kenya, the encampment policy and the lack of work permits deprives the refugees of these rights.

The Kenyan public healthcare system offers healthcare at different levels, the first level of healthcare is preventive and promotive and offered for free through community health volunteer workers. The second level of healthcare provides primary healthcare services through the dispensaries and centres for free in Nairobi County, however availability of drugs and other supplies is never assured. Patients are often referred to the private laboratories and chemists which charge commercial rates. The third and fourth levels charge fees for every service received that is consultations, drugs and investigations.

Refugees in urban areas often face numerous health complications compared with low income city dwellers , disadvantages such as lack of social security systems or health insurance schemes, and insufficient disposable income due to lack of jobs and work permits, Stigma and discrimination reduce access to already overstretched government health services.

Most urban refugees do not have a source of income and hence cannot afford to pay for healthcare services. They rely on nongovernmental organizations for the provision of services including healthcare. The increase in numbers of urban refugees has increased the need for more healthcare services among the urban refugees (Mapendo, 2007).

Just like in the camps, humanitarian organizations provide healthcare to urban refugees using donor funds. They strive to ensure quality healthcare services to urban refugees. In the camps, hospital and outpatient facilities are set up within the camp to provide healthcare services, in urban settings however refugees do not live in an enclosed setting, they are dispersed throughout low income dwellings interacting with the host community.

Healthcare for urban refugees is being provided through two main models in Nairobi, in-house and outsourcing of services. A health facility set using donor funds to provide healthcare services exclusively to these vulnerable populations, these exclusive facilities have their pro and cons including higher administrative and running costs of rent, staff salaries and capital expenditure. They are however able to purchase their drugs in bulk hence enjoy economies of scale at the same time staff are experienced on refugee issues hence offer more client centered services.

The other model commonly used is through outsourcing healthcare services from existing health facilities particularly Faith Based Organizations where the care providers refer the refugees to for healthcare services and cater for the expenses. these facilities encourage local integration of refugees since they attend same facilities as the host population, there are less running costs of rent and capital investments, the services are availed at the community level hence less transportation costs on the clients, however the quality of care and client centered services may not be assured since the facilities serve many clients including the host community.

The number of refugees is increasing and therefore there is need to expand the healthcare to serve a bigger population of refugees. With the increasing numbers, it is important to establish the most cost effective model so as to increase access to quality healthcare for this population. However, cost differential is not the only consideration in increasing access. Quality of care is another important dimension that must be considered. Besides, cost differential, if any, between the two models can be explained partly by quality of services.

The problem of poor health care quality is not the fault of isolated health professionals or solely attributable to limited resources. Rather, quality problems are systemic and are consequences of gaps in knowledge and inadequate communication, training, supervision, and incentives. These problems persist when organizations providing healthcare are unable to monitor the quality of care and take corrective action. Quality can be improved much more quickly than other factors that promote good health such as income, education, new technology, or infrastructure.

Quality of healthcare services is becoming increasingly measurable as are its costs. The failure to prevent serious complications, such as a hospital-acquired infection, may cost the patient his or her life, prolonged disability, and thousands of shillings in treatment. Avoidable surgical complication may prolong hospitalization, result in disability or death, and cause great expense and repeated procedures. Higher costs may not necessarily be accompanied by better quality of healthcare.

1.2 Problem Statement.

The health of urban refugees is important to both the refugees and the host community. This is because they don't live in isolation, and therefore poor health standards among neglected urban refugee populations can have wider repercussions among the host community. Unimmunized refugees affect the herd immunity of host populations making it difficult to eradicate illnesses. Quality healthcare services reduce recurrence of illnesses, complications to chronic illnesses and outbreaks.

Provision of healthcare services to urban refugees in Nairobi is done using two main models, in-house clinics or outsourcing services from the already existing healthcare facilities. The in-house clinics are set up where basic healthcare services are provided using donor funds specifically for refugees some humanitarian organizations prefer to send the refugees to existing healthcare facilities and they pay for the services

Humanitarian organizations depend solely on donor funds to avail healthcare to urban refugees. These funds are limited and with increasing humanitarian crisis around Africa, leading to an increase in urban refugees, these resources are shrinking.

There is need to increase access to quality healthcare services for this population who are vulnerable with no source of income. This would require use of a cost efficient mode of quality healthcare service delivery, informed by average cost and quality of providing services to a refugee in an urban area. This has however not been established.

This paper seeks to determine and compare the different models of in-house and outsourcing healthcare services in cost and quality of healthcare among urban refugees, with the objective of recommending the most cost efficient model of providing quality healthcare services.

1.3 Research Questions.

The research objectives are translated into the following research questions:

1. How much does it cost organizations to provide healthcare to a refugee using the two different models in Nairobi?
2. What is the quality of healthcare provided to urban refugees in Nairobi in the two different models?
3. What is the difference in cost and quality between in-house and outsourcing provision of healthcare service among urban refugees?

1.4.1 Broad Objective of the Research

The main objective of this study is to determine and compare the cost and quality of healthcare services between in-house and outsourcing healthcare among urban refugees in Nairobi Kenya.

1.4.2 Specific Objectives

Specific objectives of this study include;

1. To determine how much it costs organizations to provide healthcare services to urban refugees in Nairobi using the two different models
2. To determine the quality of healthcare services provided to urban refugees in Nairobi using the two different models of service provision.
3. To compare cost and quality between in-house and outsourcing healthcare services, and make recommendations.

1.5 Research Hypothesis

The study proposes the following null hypothesis:

Ho: In-house and outsourced healthcare facilities have no differences in terms of cost of care provided to urban refugees in Nairobi.

Ho: In-house and outsourced healthcare facilities have no differences in quality of care provided to urban refugees in Nairobi.

1.6 Justification and Significance of the Study

This study will be useful to policy makers through informing them of the comparative advantages of the two different health care models. By comparing costs and quality between in-house and outsourced healthcare facilities, policy makers will be able to choose the model that provides quality services at minimal costs and hence will be able to serve the increasing number of urban refugees. The findings will be used by healthcare service providers to implement future urban refugee health programs.

1.7 Scope and Limitations of the Study.

The study focuses on refugees in only one urban area, Nairobi, and the findings may therefore not be generalized to refugees in other settings. There may be other models being used by the refugees themselves to access healthcare which will not be included in this study since this study specifically focuses on the two main models.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents available literature reviewed related to cost and quality of healthcare services. The review covers a range of studies around the world. There is scarcity of literature related to cost and quality of care especially in developing countries and more so in the area humanitarian assistance.

2.2 Cost of Healthcare Services

Cost is the financial value of producing a good or service for a consumer. It is the price paid for a good or service and for the economist, depending on its ultimate use and purpose, the cost of a good or a service can vary depending on which cost concept and costing methodology is applied. A client may receive healthcare from donor funds, but if they have to spend too many hours to access the free services, then the lost work or schooling is the opportunity costs (Marshall and Hux, 2009).

A cost object is any input, component, activity, output or other item for which a separate measurement of cost is desired (Lund et al., 2009). A given cost item can have a direct or an indirect relationship with a cost object. A direct cost can be easily traced to the cost object. Indirect costs, as implied, refer to those costs which, although generated from the production process, cannot be easily directly linked to the production of a particular good or service (Huang, 2009).

An economic appraisal is the comparative analysis of alternatives in terms of their costs and consequences. There is a wide range of techniques but the most common

forms are cost minimisation analysis (CMA), cost effectiveness analysis (CEA), cost benefit analysis (CBA) and cost utility analysis (CUA) (Mullahy, 2009).

The CMA is used to choose the cheapest intervention by comparing the costs of achieving a given outcome (e.g. generic versus non-generic drugs for pain). The outcomes of the intervention have to be known to be the same. This makes it possible to focus on identifying the least cost option without having to worry about measuring and comparing outcomes (Briggs and Grey, 2000).

Cost Effectiveness Analysis compares the cost per unit of outcome among alternative interventions that produce the same or similar effect. A cost-effective intervention is one where there are more positive outcomes than alternative interventions. It is calculated by dividing the net cost of an intervention by its net effectiveness (Gosden and Torgerson, 2002)

In this ratio, the denominator represents positive outcomes from an intervention while the numerator represents the cost of obtaining these outcomes. Disadvantages include the fact that it is a narrow measure as only one outcome is being measured, is not useful in assessing a single programme and it cannot be used to compare more disparate alternatives (Basu and Manning, 2009).

When outcomes of preventive interventions are viewed as benefits, a monetary value, the CBA, is assigned to each outcome. If benefits exceed costs, then the programme should be implemented. If not, it should be rejected. In CBA, an intervention is considered beneficial if the value of benefits exceeds the value of costs. Cost benefit is expressed as a ratio with the benefits as numerator and the costs as denominator. CBA is the gold standard for economists because it shows net benefit (Glick, 2012).

Comparisons are more straightforward and it can tell both the absolute and relative efficiency. However, use of CBA in health is controversial. This is because the benefits of preventive interventions include improved quality of life and avoidance of pain, which are difficult to measure in monetary terms. This can be overcome somewhat by using willingness to pay. Use is limited by need to place monetary valuations on health outcomes (Neumann, 2009).

The CUA is an adaptation of cost effectiveness analysis. It measures an intervention's effect on both quantitative and qualitative aspects of health (morbidity and mortality). CUA focuses on increased quality of life. It is often expressed as cost per Quality-Adjusted Life Years (QALY). QALY is a tool used to measure outcome or benefit of interventions (other measures besides monetary). It produces a number that indicates the size of health gain from an intervention (Briggs and Grey (2000).

The net benefit is derived from calculating the number of life years saved, adding morbidity reduced and subtracting side effects reduced. There is also disability adjusted life years (DALY). This is an internationally standardised measurement which expresses years of life lost due to premature death and years lived with a disability. The advantage CUA has over CBA and CEA is that it can be applied to more disparate interventions and it combines more than one aspect of health (Glick, 2012).

However, like CEA, CUA can be applied in circumstances where the available budget is fixed and maximum benefits are sought or when the objective is fixed and the minimum cost method of achieving the objective is sought. Cost utility analysis is also used in the measurement of immediate intervention outcomes such as patient

satisfaction. It is not helpful in assessing a single programme (Briggs and Grey, 2000).

Economists define costs as the value of the resources used to produce something. Costing studies involve the identification, measurement and valuation of resources consumed by an intervention or activity of interest (Drummond *et al.*, 1987). Pure costing studies are different from cost-effectiveness studies, which compare the costs and outcomes of health interventions (Brouwer *et al.*, 2001).

That economic evaluation deals with costs and benefits and only when this information is available can decisions be made regarding the combination of health care interventions which should be made available to maximize benefits from the available budget. In most countries, estimating what it would cost to expand the coverage of existing interventions or to add new interventions relies heavily on assumptions. (Weinstein and Stason, 2009)

Cost data can be extremely hard to find in developing countries. Ideally, cost analysis should include direct costs such as doctors' or nurses' time and supplies used as well as indirect costs such as a portion of administrative costs. The cost of equipment also needs to be spread across its many uses. These costs are usually not readily available, however, and thus the costs of interventions reported in developed countries are often used and adjusted for developing-country settings. Alternatively, a study conducted in one low-income setting is sometimes used to estimate costs in all or several low-income countries. (Pliskin and Taylor, 2007)

More and better data is needed in low- and middle-income countries so that analysts do not need to use cost data and assumptions from high-income countries or rely on expert judgments. The need for information starts, in some cases, with better estimates of the incidence and prevalence of particular diseases, and with data on the coverage and outcomes of health interventions. (Barnett, 2009).

2.3 Quality Of Healthcare Services

Paying attention to the quality of health care is not a luxury that only high-income countries can afford, but another pillar of the health service system that has a profound impact on the cost-effectiveness and equity of interventions (Fishman and Hornbrook, 2009).

According to the U.S. Institute of Medicine's definition of the quality, the concept encompasses patient safety, effectiveness, patient centeredness, timeliness, efficiency and equity across: genders, ethnic groups, locations, and socio-economic classes. A range of policy interventions can affect these six dimensions of good quality care.

One assumption is that improved quality requires additional resources. This assertion is only partially true or at least to the extent that quality improvement activities require the investment of personnel's time and effort. Also, it is acceptable that more advanced technologies to improve the delivery of quality care may require additional resources.

Theory in quality economics proposes that there is an inverse relationship between cost and quality. This concept relies on the fact that as quality increases; it leads to a

reduction in waste in the system that in turn promotes productivity. Improved productivity implies that a product or a service can be produced at the lowest cost possible, hence better quality is ultimately linked to lower cost. The ideal healthcare provider is defined as one who selects and implements the strategy of care that maximizes the health status improvement without wasted resources.

The long-term sustainability of rising healthcare costs, the accelerating numbers of uninsured, and the double-digit increases in healthcare premiums are driving employers and health plans, as well as governments, to demand cost-effective, safe, and patient-centred care. Both physicians and hospitals are being assessed with a combination of quality and cost efficiency measures (Marshall and Hux (2009)).

2.4 In-house and Outsourcing Healthcare Services

There are a number of direct and indirect benefits associated with outsourcing. Direct benefits are those benefits obtained when the vendor provides the same or better service for the same or less cost that would otherwise be achieved in-house. Service should be retained in-house unless there is proof that significant indirect benefits would be obtained. On the other hand, indirect benefits can result in a situation where resources that have been liberated through outsourcing are directed to more productive competitive functions retained by the facility (Jumah and Wood, 2000)

Outsourcing often has a negative effect on the quality of patient care. It affects how National Health Services workers work together to deliver care. Outsourcing of clinical services shows some negative effects on patient care, poor value for money as well as evidence of inadequate monitoring and evaluation of the services. Although

there was some benefits of shared services, the experience of national health services IT project was a clear failure of outsourcing of services

The biggest barriers to outsourcing services are concerns about the service provider's loyalty, cited by 73% of respondents and the ability to understand the organizations culture or priorities, cited by 69% of the respondents. Roughly four out of ten facility executives had brought services back in-house after having outsourced them. The biggest reasons being to improve quality, cost performance and response time (Edward, 2000)

The cost and quality of healthcare varies in different healthcare settings. In some situations, there is better quality and lower costs at outsourcing centres since there is lower operation and capital costs, at the same time, quality of healthcare may be compromised as organizations are maximizing on their profits. In-house settings may provide better quality of healthcare services with unlimited resources but may comprise on quality of healthcare while trying to reduce their operational costs.

2.5 Summary of the Literature Review

One of the objectives in the field of cost and quality is to define and manage the cost of quality, requiring that the investments made in improving quality are justified by the rewards/benefits obtained by minimizing or eliminating poor quality. To quantify the cost of a quality, or the value of resources saved by improving the quality of clinical service delivery (Lund, Yabroff, Ibuka et al., 2009).

Additional resources do not guarantee improved quality. Second, the use of quality standards has the potential to reduce variation. Decrease in variation is well recognized as the principal approach to reducing waste of resources and hence saving costs. Finally, improved quality often leads to increased efficiency and reduced-rework, which in turn may result in saved resources. Another commonly held assumption is that costs of poor quality are easily seen and fixed. However, much of the costs of poor quality are hidden and unknown. Part of the reason for this is that the causes of poor quality are often complex.

Despite increasing awareness of the plight of urban refugees, there is a scarcity of information and literature on refugee's health in urban settings and programming to address the health needs of this vulnerable population. The international community typically responds to refugee situations by establishing care and maintenance programmes specifically for refugees (Fishman and Hornbrook, 2009).

2.6 Conceptual Framework

Cost is the value of resources used to produce a service or a program. It is as a result of both direct cost of medical supplies and the indirect cost of producing healthcare such as infrastructure and human resources.

Quality of healthcare is the extent to which healthcare services produces the desired results. It was measured from the clients' perspective. Quality of care looked at how the infrastructure was well utilized, use of evidence based practices, Reduction of adverse effects and discrimination, timeliness of services and focus on clients. These were influenced by the availability of adequate human resources, proper infrastructure and the institutions culture.

Cost and quality of healthcare was therefore dependent on Infrastructure, human resources, medical supplies. High cost of production results in high cost of healthcare services. At the same time, the right infrastructure, human resources and medical supplies resulted in evidence based practices, better customer relations and resulted in better quality of care.

The cost and quality of healthcare varies in different healthcare settings .In some situations, there is better quality and lower costs at outsourcing centres since there is lower operation and capital costs, at the same time, quality of healthcare may be compromised as organizations are maximizing on their profits. In-house settings may provide better quality of healthcare services with unlimited resources but may comprise on quality of healthcare while trying to reduce their operational costs.

Figure 1.1 below shows a conceptual framework on cost and quality of healthcare.

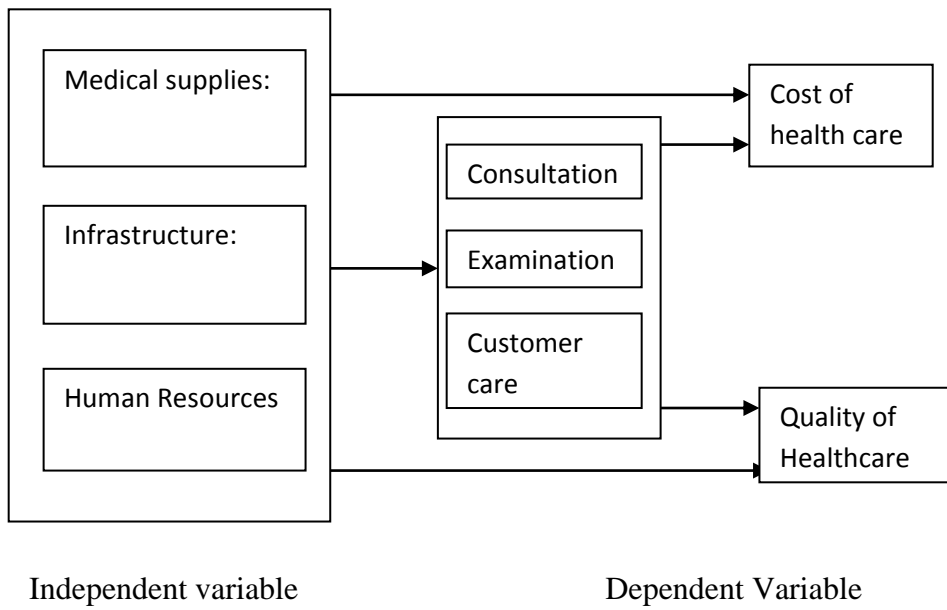


Figure 1.1: *Conceptual Framework*

CHAPTER THREE: METHODOLOGY

3.1 Research Design

The study will adopt a descriptive cross-sectional research design. The basic idea behind survey methodology is to measure the influence of selected explanatory variables on given response variables by asking people questions followed by an examination of the variables. This study will also use a mixed methods research design, (Babbie, 2012),).

3.2 Variables of the Study

3.2.1 Independent Variable

The independent variable was the cost and quality inputs. They include infrastructure (rent and capital items) medical supplies (drugs and laboratory supplies) and Human resources (salaries)

3.2.2 Dependent Variable

The dependent variables were cost of healthcare and quality of healthcare services.

3.3 The Study Area

The study was facility based focusing on cost and quality of care provided to urban refugees. It was conducted at two facilities in Nairobi County. The first was RefugePoint health centre in Hurlingham, Nairobi the only in-house health facility providing healthcare to urban refugees in Nairobi. The second facility was Diwopa health centre a faith based health facility being used by a number of organizations as

an outsourcing health facility in Kayole, Nairobi. The facilities are purposively selected due to the fact that RefugePoint is the only in-house facility providing healthcare to urban refugees in Nairobi and Diwopa health centre is used by a number of organizations to outsource healthcare services in Nairobi.

3.4 Target Population

The target population is urban refugee living in all the sub-counties within Nairobi. Study participants were recruited from refugee patients seeking treatment at RefugePoint health centre the only in-house health facility for urban refugees and Diwopa health centre an outsourcing faith based health facility.

3.5 Sampling Technique and Sample Size.

Purposive sampling was used to select the two facilities. Respondents were selected from the daily attendance list of patients who walked into the clinic randomly. Using the health information system reports from the Ministry of health and previous clinic records, the commonest illnesses were selected for purposes of comparison. Upper respiratory tract, gastro intestinal, musculo-skeletal, dermatological and urinary tract illnesses accounted for over 80 percent of the illnesses. A structured questionnaire was administered as exit interview to refugee patients diagnosed with any of the selected five common illnesses.

Since the two facilities were walk in clinics, patients would randomly walk in for treatment from different nationalities. The two facilities used computer databases for record keeping. The research assistants selected the patients who were refugees and

diagnosed with any of the five selected illnesses. They would then administer the questionnaire to those who consented as exit interviews.

3.5.1 Sample Size

According to Saunders, Lewis and Thornhill (2003) the sample size for a population

of 10,000 or more can be computed as per the formula: $n = \frac{pqz^2}{e^2}$ Where,

$n =$ Minimum Sample Size

$p =$ Population proportion with given characteristic

$z =$ Standard normal deviate at the given confidence level

$e =$ Error Margin

Saunders et al. (2003) recommend that since p and q are unknown, both are set at 50%. At a confidence level of 95% that was used for this study, $z = 1.96$ and the sampling error of $e = \pm 5\%$.

Thus, sample size n becomes:

$$n = \frac{0.5*0.5*(1.96)^2}{0.05^2} = 384.16$$

$$0.05^2$$

$$385 + 10 = 395$$

$$n = 395$$

The actual numbers of urban refugees has not been established. Some estimate at 55,000 (UNHCR, 2012) and others over 100,000 (RCK, 2008) refugees reside in Nairobi.

3.6 Construction and Research Instruments

A semi-structured questionnaire was used to collect data on quality of healthcare as perceived by the clients. A treatment regimen form was attached to every questionnaire to collect data on the different inputs: laboratory, procedure and drugs dispensed, to provide the medical costs. Cost analysis spreadsheets were used to collect data on the overhead costs incurred in treating the patients: salaries, medical equipment, rent, professional licences and certificate fees, waste management fees, stationary, internet and communications fees.

3.7 Pilot Study

3.7.1 Validity

Validity refers to whether the questionnaire or survey measures what it intends to measure (Saunders et al., 2007). There are a number of types of validity that was measured including face validity (whether at face value, the questions appear to be measuring the construct), content validity (whether all important aspects of the construct was covered), criterion validity/predictive validity (whether scores on the questionnaire successfully predict a specific criterion) and concurrent validity (whether results of a new questionnaire are consistent with results of established

measures). Any improvements to the tools suggested during the piloting phase were incorporated in the document before proceeding to the field to collect data.

3.7.2 Reliability

Reliability of an instrument is the degree of consistency with which it measures a variable (Van Teijlingen and Hundley, 2001). All research instruments were pilot tested in order to check their reliability. The Cronbach Alpha method was employed during the determination of reliability.

The method is ideal for the study because it requires a single administration of a test and is the most appropriate type of reliability for measures that contain a range of possible answers for each item of an instrument.

3.8 Data Collection Techniques

Research assistants were recruited and trained on data collection skills. The research tools were improved and used for the actual data collection. Quality of care data was collected using a structured questionnaire which was administered as an exit interview to all the clients treated with any of the five selected common illnesses at the two Facilities by the researcher and two trained research assistants. To measure the quality of care, the six commonly used indicators were used (Effectiveness, Efficiency, Equity, Patient centeredness of services, patient safety and Timeliness of services)

A treatment regimen form was attached to every questionnaire to collect data on diagnosis and actual drugs used in treating the specific illness and the quantity used.

Cost analysis spreadsheets were used for recording the different indirect (overhead costs) which contributed indirectly to the cost of treating a patient. Data from the finance department and the pharmacy of both facilities was used to provide the cost of drugs administered to the patients and the non-medical costs of staff salaries, rent, equipment, communication and professional certification.

3.9 Data Analysis

Analysis of the data was done using a combination of designs including descriptive statistics, which include means, frequencies and percentages and inferential analysis in the form of chi-square tests of association and t testing for the mean costs (Agresti, 2007). Step down approach was used to determine the total average cost of providing healthcare at each health facility. Costs were categorized into direct medical and overhead costs. Activity based costing was used to determine the direct medical cost of treatment. All resources used in every treatment regimen were identified, to give the quantity of resource. Cost was a product of quantity of drug consumed (Q) and its unit price (P)

A step down approach was used to allocate to the direct non- medical costs. A cost analysis excel sheet was used to allocate all administrative costs incurred at each facility these include, capital costs, rent, salaries, communication and internet, cleaning services and professionals fees. The cost per individual client was got by disaggregating the shared cost and allocating it using an allocator factor (number of clients).

The cost of treating each illness will therefore be sum of indirect (overhead) costs and direct medical cost for each illness. Comparison was done on costs at the two

facilities and testing done using t test on the different means. Data on quality of healthcare was analysed using SPSS. Chi square tests were run and the results presented using tables and graphs.

3.10 Logistical and Ethical Considerations

Participants were provided with adequate information on the research before the interview, confidentiality and anonymity was assured and verbal consent was sought. Approval was sought with Kenyatta University Ethics Review Committee, Research permit obtained from National Council of Science and Technology and authorization sort from the hospital administrators at RefugePoint (in-house) and Diwopa (outsourced) health facilities.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the findings of the data analysis and provides a discussion of the same in light of the literature reviewed.

4.2 Social Demographic Characteristics of Respondents.

For purposes of analysing these data, the study made use of percentages and frequencies to describe patterns and trends.

4.2.1 Age of the Respondents

Most of the respondents were between 21 and 30 years at the two facilities with 47.2% at in-house facility and 39.3% at the outsourced facility. Those above the age of 50 were more at outsourced with 5.5% of the respondents while 1.9% was above 50 years old at the in-house facility.

Table 4.1: Age of Respondents

Demographics	Characteristics	In-house/RP	Outsourcing/Diwopa	Total
Age of respondents in yrs	<20	20 (9.4%)	62 (33.9%)	82(20.8%)
	21-30	100(47.2%)	72(39.3%)	172(43.5%)
	31-40	52(24.5%)	32(17.5%)	84(21.3%)
	41-50	36(17%)	7(3.8%)	43(10.9%)
	>51	4(1.9%)	10(5.5%)	14(3.5%)

4.2.2 Gender of Respondents

There were more female respondents at both facilities with 60.4% being female at in-house facility and 53% at the outsourced. The males were 39.6 % at in-house facility and 47% at outsourced facility.

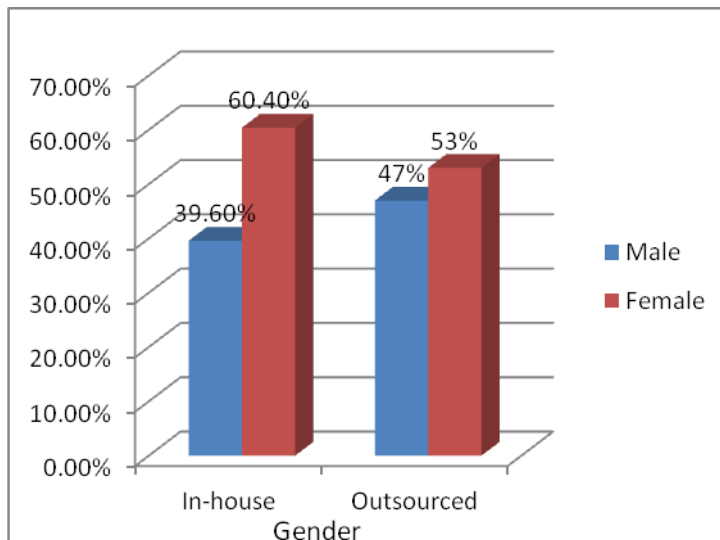


Figure 4.1 Gender of respondents.

4.2.3 Country of Origin

Most of the respondents were refugees from Congo with 62.3% of the respondents from in-house and 88.5% at outsourced facility. At in-house, the second largest country of origin was Somalia at 13.2% followed by Rwanda at 11.3%, Ethiopia at 9.4% and the lowest at 3.8% was from Burundi. At outsourced, the second largest country of origin was Burundi at 6%, Rwanda at 4.4% and lastly, Somali, at 1.1%. There were no respondents from Ethiopia at the outsourced facility.

Table 4.2: Country of Origin

Country of Origin	In-house/RP	Outsourcing/Diwopa	Total
Congo	132(62.3%)	162(88.5%)	294(74.4%)
Rwanda	24(11.3%)	8(4.4%)	32(8.1%)
Somali	28(13.2%)	2(1.1%)	30(7.6%)
Ethiopia	20(9.4%)	0(0%)	20(5.1%)
Burundi	8(3.8%)	11(6%)	19(4.8%)
	212 (53.7%)	183(46.3%)	395(100%)

4.3 Cost of Healthcare Provided to Urban Refugees

Cost of healthcare was divided into categories, direct medical costs of drugs and the overhead costs. The average direct medical cost was added to the average overhead cost to give the total average costs of attending to one patient.

4.3.1 Direct Medical Costs

The average cost of medication one client with respiratory tract illnesses at In-house clinic was kshs 128.04 where as at outsourcing centre, the average cost of medication was kshs 604.56. The average cost of medication for gastro intestinal illnesses at the in-house facility per client was kshs 174.57 compared to 554.96 at the outsourcing centre. Musculoskeletal illnesses followed with average cost of ksh 93.13 at In-house and 549.05 at outsourced centre. Dermatological conditions were fourth with average cost of kshs 83.68 at In-house and 610.83 at outsourced centre. Urinary tract illnesses fifth at average cost of 88.22 at in house and 680.71 at outsourced centre.

Table 4.3: Direct Medical Costs

	Health Facility					
	In-house (RP)			Outsourced(Diwopa)		
Diagnosis	No of patients	Total costs	Average cost per Diagnosis	No of patients	Total costs	Average cost per Diagnosis
URTI	104	13,316.35	128.04	93	56,224.00	604.56
Gastrointestinal illnesses	54	9,426.55	174.57	52	28,858.00	554.96
Musculoskeletal Illnesses	30	2,793.97	93.13	19	10,432.00	549.05
Dermatological conditions	15	1,255.18	83.68	12	7,330.00	610.83
UTI	9	793.95	88.22	7	4,765.00	680.71
Total	212	27,586.00	130.12	183	107,609.00	588.03

The total costs at in-house facility is Ksh 27,586 for 212 clients giving an average of 130.12 per client where as at outsourced centre, total direct costs are kshs 107,609 for 183 clients who received drugs giving an average of 588.03 per client. The findings agree that the cost of healthcare services in Nairobi differed from one service provider to another. Monthly cost of different HIV healthcare programs ranged from USD 390 (kshs 31,000) to USD 4902 (kshs 392,160) (Nick Agulu 2011).

4.3.2 Overhead Costs

The overhead cost incurred while providing healthcare at In-house facility was kshs 2,583,986 annually and a total of 3226 clients were served at the facility giving an average of kshs 801. At the outsourcing centre, the overhead costs was kshs 545,126 annually with a total of 1564 clients served giving an average being kshs 349.

Table 4.4: Overhead Costs

Details	In-House Facility (3226 pts)			Outsourced Facility (1564)	
	Annual costs/value	Clinic annual allocation	Cost per client	Annual costs	cost per client
Indirect Costs					
Rent =(157500*12) *5/15	1,890,000	504,000	156	0	0
Capital Items(5 year depreciation)					
Fridge, stethoscope, table, seat.	20,000	4000	1	0	0
Computer -clinic database/records	75,000	18,750	6	0	0
Medical license once per year	10,000	10,000	3	0	0
Medical certificate once per year	7,900	7,900	2	0	0
professional indemnity =36 k for three staff	36,000	36,000	11	0	0
			0	0	0
Biosyte waste disposal 7540 every three months	30,160	30,160	9	0	0
			0	0	0
Salaries:			0	0	0
clinician	996,000	996,000	309	0	0
Nurse	876,000	175,200	54	0	0
Program Manager *12*1/4	1,759,692	439,923	136	439,923	282
Finance resources*12*1/4	904,056	45,203	14	45,203	29
Director -fundraises, reports,	6,000,000	60,000	19	60,000	38
Cleaner 34500*12/2*4/15	207,000	55,200	17	0	0
			0	0	0
Stationary /4 sections 255/4	255,000	63,750	20	0	0
Communication 200k/4	50,000	12,500	4	0	0
Internet 41800*12	501,600	125,400	39	0	0
			0		0
Total overhead cost		2,583,986	801	545,126	349

The Staff salaries contributed to 59% of the total average costs while the rent costs contributed to 16% of the total average costs at the in-house facility. This was higher compared to another study where the staff salaries contributed to 27% at NGO based facility, 31% at Church Based facility and 43% at Community based facility, (Nick 2011). At the outsourced facility, staff salaries contributed to 37% of the total average costs which is comparative to the previous study.

4.3.3 Total Average Cost of Healthcare Services

Average direct cost of care at In-house facility is lower at kshs 130.1 than the average cost of care at outsourced centre at kshs 588.02, while the overhead cost at In-house facility is higher at kshs 801.00 than the average cost at the outsourced facility which was kshs 349.00. Overall the costs of care both direct cost and overheads, at in-house facility is slightly lower at kshs 931.10 than the outsourced centre which was kshs 937.02.

Table 4.5: Total Average Cost of Care.

Total Costs	In house/RP		Out sourced/Diwopa	
	Description	Total annual Costs	Average cost per client	Total annual cost
Annual overhead costs	2,583,986	801(86%)	545,126	349(37%)
Total direct costs of respondents	27586	130.1(14%)	107609	588.02(63%)
Total costs		931.1(100%)		937.02(100%)

The direct average cost of drugs at the in-house facility was 14% of the total average cost at the facility while at the outsourced facility, the average cost of drugs was at 63%. On the contrary, in their study, Chandler, Decker and Nziyige (2004) found that cost of drugs was not a major cost driver in healthcare programming averaging at 2%. The overhead costs at in-house contributed to 86% of the total costs while at the outsourced facility, the overhead costs was at 37%.

4.4 Quality of Healthcare Services Provided to Urban Refugees in Nairobi.

Quality of healthcare services was measured on the clients' perceptions of perceived quality of care using: Timeliness, patient centeredness, effectiveness, equity, patient safety and efficiency of healthcare services (AHRQ, 2004)

4.4.1 Timeliness of Services

Service time was faster at in-house facility with 94% of the respondents getting served within 30 min and only 6% taking ½ to 1 hour. At outsourced facility, 49% of the clients received services within 30 minutes, 44% took ½ -1 hour while 7% of the respondents took between 1 and 2 hours. The differences in timeliness of services were occasioned by services being offered faster at In-house facility compared to the outsourcing centre.

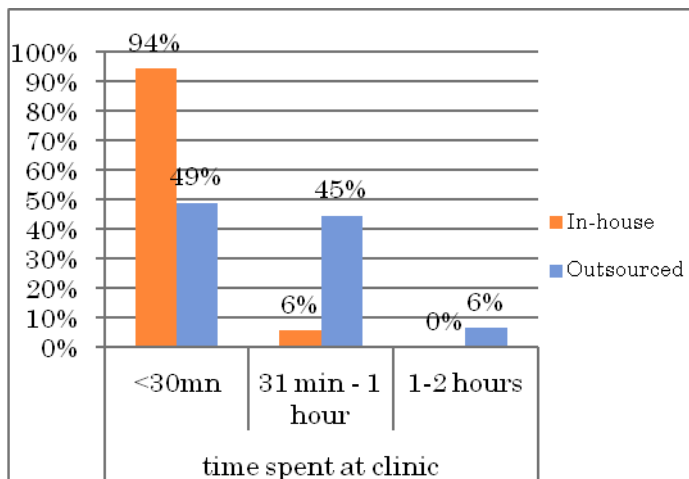


Figure 4.2: Time spent receiving services.

Previous studies have shown waiting time to be of concern to the clients than any other aspect of quality (Burungi and Ouma, 2006)

4.4.2 Patient Centeredness of Services

a) Clinician Understood Patients' Problems

96.2% of respondents at in-house facility felt that they were understood by the clinician with 3.8% saying the clinician did not understand their problems. At the outsourced facility, 89.1% felt they were understood with 10.9% feeling that the clinician did not understand their problem.

Chi square analysis revealed a significant value [$\chi^2 (1) = 7.635, p = .006$] indicating that the clinicians understanding of patients problems was significant by location where the services were offered. We can thus conclude that there was a statistical difference between in-house and the outsourced facility, in terms of clinicians understanding of patients problems. In-house clinicians took more time in understanding clients problems compared to those at the outsourced facility.

b) Client was Given a Chance to Ask Clinician Questions about their Illness,

86.8% were given a chance to ask questions with 13.2% not given a chance at in-house. At the outsourced facility, 59.6% were given a chance to ask questions and 40.4% said they were not given a chance to ask questions about their illness. Again, in-house was more responsive towards its clients in terms of allowing them time to give feedback or seek clarifications.

Chi square analysis revealed a significant value [$\chi^2 (1) = 38.019, p = .000$]. We can thus conclude that there was a statistical difference between in-house and the outsourced facility in offering clients an opportunity to ask questions about their illnesses. Again, in-house clinicians offered clients more time to offer feedback regarding their illnesses.

c) Client Understood what Health Worker Explained to Them.

At in-house facility, 92.5% of respondents understood what the clinician explained to them with 7.5% saying they did not understand while at the outsourced facility, 84.7% of the respondents understood with 15.3 % saying they did not understand what the health worker explained to them.

Chi square analysis revealed a significant value [$\chi^2 (1) = 5.965, p = 0.015$], Thus we can conclude that there was a statistically significant difference in clients understanding of what the health worker explained to them between in-house and the outsourced facility. Health workers at in-house were more proficient in this regard.

Table 4.6: Summary on Patient Centeredness of Services

Patient centeredness of services		Health		Total	Chi Square tests
		In-house	Outsourced		
did clinician understand patient	yes	204(96.2%)	163(89.1%)	367(92.9%)	chi=7.635 df=1 p=0.006
	no	8(3.8%)	20(10.9%)	28(7.1%)	
patient allowed to ask questions	yes	184(86.8%)	109(59.6%)	293(74.2%)	Chi=38.019 df=1 p=0.000
	no	28(13.2%)	74(40.4%)	102(25.8%)	
patient understood clinician	yes	196(92.5%)	155(84.7%)	351(88.9%)	chi=5.965 df=1 p=0.015
	no	16(7.5%)	28(15.3%)	44(11.1%)	

The findings concur with previous findings by Lethbridge, (2012) Impact of outsourcing health care services had a negative impact on patient care. In another study, respondents were more satisfied with time given to ask questions 89.9% and the provider answering their questions 88.4%, (Micah, 2009)

4.4.3 Effectiveness.

a) Physical Examination

88.7% of clients at in-house were examined physically while only 33.9% said they were examined physically at outsourced facility. 11.3% were not physically examined at in-house with a majority 66.9% not examined physically at outsourced facility. Chi square analysis revealed statistically significant findings for physical examination at the two locations [$\chi^2 (1) = 126.95, p = .000$]. This means that differences for physical examinations were not occasioned by chance but rather by a deliberate attempt at obtaining correct diagnoses. In-house clinicians were more diligent in this respect compared to the clinicians at the outsourced facility.

b) Laboratory Utilization

Laboratory usage was higher at the outsourced center with 67.8% of the respondents sent to the laboratory while the in-house facility, only 39.6% were sent to the laboratory. 60.4% at in-house facility were not sent to the lab while 32.2% were not sent to the laboratory at outsourced facility. Chi square analysis revealed statistically significant findings for laboratory examination at the two locations [$\chi^2 (1) = 31.191, p = .000$]. This indicates that differences for laboratory usage were not occasioned by chance but by a real difference in approach between the two facilities. Outsourced personnel embarked on more laboratory investigations compared to in-house personnel.

Table 4.7: Summary on Effectiveness of Services

Effectiveness		Health		Total	Chi Square tests
		In-house	Outsourced		
Patient examined physically	yes	188(88.7%)	62(33.9%)	250(63.3%)	Chi=126.95 df=1 p=0.000
	no	24(11.3%)	121(66.1%)	145(36.7%)	
Lab requested	yes	84(39.6%)	124(67.8%)	208(52.7%)	Chi=31.191 df=1 p=0.000
	no	128(60.4%)	59(32.2%)	187(47.3%)	

4.4.4 Equity

a) Treated Fairly

91% said they were treated fairly at in-house while 85% felt treated fairly at the outsourced centre. 9% said they were not treated fairly at in-house with 15 % saying the same at Outsourced. These findings were not significant by location and could be assumed to have occurred by chance.

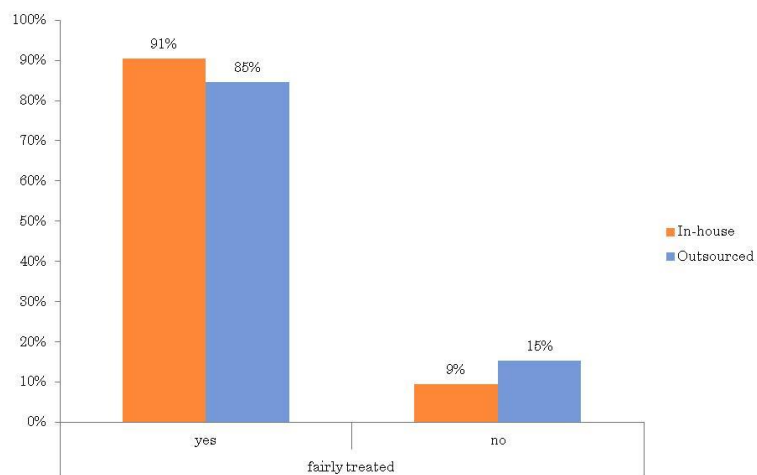


Figure 4.3: Patient treated fairly.

4.4.5 Patients' Safety

None of the respondents reported getting actual harm at in-house clinic with 3.3% reporting actual harm being caused at outsourced. Asked further what harm, one of the clients reported getting the wrong injection with the others did not mentioning the actual harm.

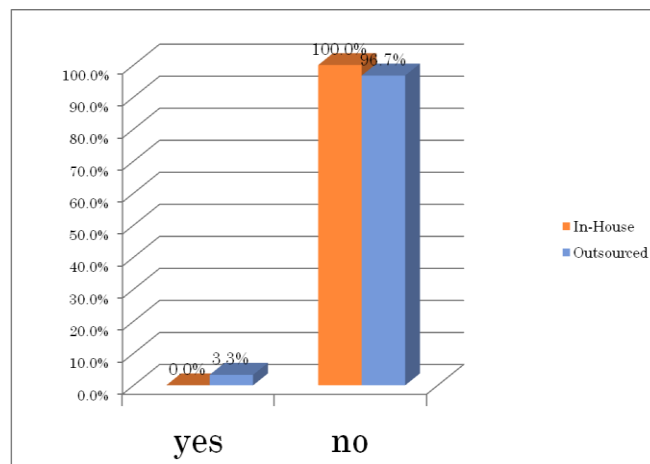


Figure 4.4: Patient experienced actual harm.

4.4.6 Efficiency

a) Laboratory Used Well

89.6 % of respondents at outsourced facility felt laboratory services was used well while 69.8% at in-house felt laboratory was used well, 30.2% felt lab was not well utilized at in-house with only 10.4% feeling same way at outsourced centre. The chi values were significant [$\chi^2 (1) = 23.214, p = .000$], implying that differences in the perception of laboratory at the two locations usage were significant. The laboratory usage at outsourced was perceived as more efficient than at in-house.

b) Drugs Used Well

98.1% of the respondents at in-house said drugs were used well with 79.2% saying the same at outsourced facility. 20.8% of the respondents at outsourced felt drugs were not used well with only 2% saying drugs were not used well at in-house facility. The Chi Square values were significant [$\chi^2(1)=36.837$, $p=.000$], indicating that the differences in perception between the two locations regarding how well drugs were used were significant by location and that in-house facility had a higher perception among clients of using its drugs well compared to outsourced.

Table 4.8: Summary on Efficiency

Efficiency		In-house	Outsourced	Total	Chi Square tests
Laboratory services used well	yes	148(69.8%)	164(89.6%)	312(79.0%)	Chi=23.214 df=1 p=0.000
	no	64(30.2%)	19(10.4%)	83(21%)	
drugs used well	yes	208(98.1%)	145(79.2%)	353(89.4%)	Chi=36.837 df=1 p=0.000
	no	4(1.9%)	38(20.8%)	42(10.6%)	

The Findings concur with a previous study that found provider behaviour and availability of necessary medicine was key to client satisfaction (Mwaniki, Kabiru and Mbugua 2002).

4.5 Comparing Cost and Quality between In-House and Outsourcing Healthcare Services.

The third objective was to compare the two models of in-house and outsourced facilities using cost and quality of healthcare services.

4.5.1 Comparing Cost of Healthcare between In-house and Outsourced Facility.

The average direct medical cost at inhouse facility was 130.12 compared to the outsourced facility which was at 588.03. This was significantly different [t-test=-22.959, df 302.290 and p=.000], however with additional overhead costs, the inhouse facility had an average of 931.12 while the outsourced centre it was 937.03. There was no significant difference in the total average cost between the two facilities [t-test=-.296, df 302.290 and p=0.767]

Table 4:9: Comparing Mean Costs at In-house and Outsourced Facility.

Cost of Healthcare		n	Mean	t-test
Direct medical costs	In-house facility	212	130.12	t=-22.959 df=302.290 Sig = 0.000
	outsourced facility	183	588.03	
Over all costs	In-house facility	212	931.12	t=-.296 df=302.290 Sig=0.767
	Outsourced facility	183	937.03	

Comparing the cost of care between in-house and outsourced facility, there was no significant difference in total average cost, previous study also found that cost cutting and an increase in quality through outsourcing had not yet been realized (Hofer et al 2011) According to International Facility Management Association, In order to improve on cost performance, four out of ten facilities had brought services back in-house after having outsourced.

4.5.2 Comparing Quality of Healthcare between In-House and Outsourced Facilities.

A quality index table was used to compare the different responses in quality of care. The six commonly used quality of healthcare indicators were measured on a percentage scale. The in-house facility scored 87.53 % while the outsourced centre scored 73.99%. The in-house facility was rated high on most of the quality of care indicators with only laboratory utilization and usage where the outsourced centred was rated higher.

Table 4:10 Comparing Quality of Healthcare between In-house and Outsourced Facility:

Quality Indicators	Question	Index of Quality	
		In-house	Outsourced
Patient centeredness of services (%*1/6*1/3)	did he understand patient	5.34%	4.95%
	allowed to ask questions	4.81%	3.31%
	patient understood clinician	5.14%	4.71%
Timeliness (%*1/6)	time spent seeking services	15.72%	8.20%
Equity (%*1/6)	treated fairly	15.17%	14.17%
Effectiveness (%*1/6*1/2)	was patient examined physically	7.39%	2.83%
	was lab requested	3.30%	5.65%
Patient safety(%*1/6)	any harm occurred	16.67%	16.12%
Efficiency (%*1/6*1/2)	lab used well	5.82%	7.47%
	drugs used well	8.18%	6.60%
	Total	87.53%	73.99%

The study agrees with a previous study that found the reasons for rating of services as good quality was good treatment by staff 24%, availability of necessary medicine 18% and short waiting time at 10.8% (Micah K. 2009)

According to the U.S. Institute of Medicine's definition of the quality, the concept encompasses patient safety, effectiveness, patient centeredness, timeliness, efficiency and equity. In line with the observations by Jumah and Wood (2000), it would thus have been better for the clients to obtain their services from the in-house facility, given that the outsourced facility does not show any significant benefits in comparison.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings of this study, presents the conclusions and makes recommendations for further research.

5.2 Summary

The purpose of the study was to compare in-house and outsourcing of healthcare services using the cost and quality measures in providing health care to urban refugees. The study problem was informed by the fact that healthcare for urban refugees are provided using two main models, an outsourced facility and an in-house facility. The health of urban refugees was seen to be important since they do not live in isolation but live amongst the host population and their health is as important as that of the host population. Providing them with healthcare facilities via the two models have cost and quality implications.

The in-house model (RP) achieved the least direct medical costs and as per cost minimization model, it is the most suitable in terms of minimizing direct medical costs. However, the outsourced model (Diwopa) achieved the lowest costs in terms of the overhead costs. The overall cost (direct and overhead), The In-house facility was slightly lower than the outsourced model but the difference was not statistically significant.

In terms of quality, The In-house model outweighed the outsourced model on many of the indicators service time, patient centred ness of services, fairly treated, patients'

safety and clients felt that drugs were used well. The outsourced model was rated high only in laboratory utilization.

5.3 Implications of the Findings

The findings of the study have pointed out that despite the in-house model being cheaper with direct medical cost, with additional overhead costs, the total average costs at the in-house facility was not statistically different from the total average costs at the outsourced facility.

In terms of quality, the in-house model prevails. The implication for the study is that clients receive better quality services at in-house compared to the outsourced centre. There will be need however to increase laboratory utilization as this is one area that was rated low compared to the outsourced centre. The quality of care at the outsourced centre was rated lower on most of the indicators when compared to the in-house facility.

5.4 Conclusion

- At the in-house facility, the average direct costs was 14% (kshs130.1) of the total average cost whereas the overhead costs was at 86 % (kshs 801) of the total average cost which was Kenya shillings 931.1
- At the outsourced centre, the average direct cost was 63%(kshs 588.03) of the total average costs whereas the overhead cost 37%(kshs 349) of the total average costs which was Kenya shillings 937.03

- In terms of quality healthcare services, the In-house model scored high at 87.53% on a scale of 100 % while the outsourced model scored lower at 73.99% on the same scale of quality index.
- There was no significant difference in the overall cost of healthcare between in-house and outsourced facility. Quality of care was rated high at the in-house facility compared to the outsourced facility.

5.5 Recommendations

The study therefore recommends that:

- The in-house facility should look for ways to reduce their average overhead costs that is rent and salaries. Since the average direct medical cost was significantly low, with lower overhead costs the total average costs would be significantly low.
- The in-house facility is providing better quality of services apart from laboratory utilization. It is recommended therefore that the in-house facility should increase utilization of laboratory services to ensure evidence based health practices. At the same time, the outsourced facility should educate their staff on quality of care measures in order to improve on their overall quality of care.
- The in-house model was recommended since quality of healthcare services was higher than at the outsourced model despite there being no significant difference in cost with the two models. At the same time the in-house model should look for ways of reducing their overhead costs on rent and salaries hence lower overall total average costs.

5.6 Further Research

This study mainly approached the cost analysis from a Cost Minimization Analysis point of view and it would be interesting to see what the findings would reflect from a Cost Effectiveness Analysis view. The research therefore recommended further studies are done that examine the study from Cost Effectiveness Analysis point of view.

Further research to be conducted to establish the societal costs which are incurred by the refugees as they seek these free healthcare services at different facilities such as travel costs and opportunity costs incurred as the clients access healthcare services at the different facilities.

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APPENDIX I

Map



APPENDIX II

Verbal Consent

My name is Esther Njeri Kamau, I a Masters student at Kenyatta University School of public Health, department of Health management. I am undertaking a study on Cost and Quality of Healthcare Services Provided to Urban Refugees through In-house and Outsourced Health Facilities in Nairobi, Kenya. I will be administering questionnaires at RefugePoint Health centre and Diwopa Health centres both in Nairobi.

Thank you for taking your time to talk to me about the services you have received at this facility. The purpose of this interview is to get your views on the quality of healthcare services as well as collecting data about the drugs that you have received. Your Name has been selected randomly from the list of patients who are receiving services at the facility today. This interview will take approximately 30 minutes.

Participation in this interview is completely voluntary. There will be no direct benefits or rewards following this interview either monetary or otherwise, neither will declining to participate result in any penalty or loss of benefits to which you are otherwise entitled. You may decline to participate or refuse to answer any questions during the interview. Your identity will remain confidential and your response to the questions in this interview will be reported only in the aggregate and will not be attributed to you individually.

The information gathered will be shared with Kenyatta University Ethics Review Committee, National Council for Science and Technology and the Ministry of Health. The study outcome will help in advising future programming for humanitarian organizations providing health care services to urban refugees in Nairobi and other

urban settings to ensure efficiency in use of limited donor funds and better quality of services for all urban refugees.

You are free to ask any questions during and after this interview and you can also contact me in the future through 0722255649 or Kenyatta University Ethics Review Committee.

Do you have any questions? Are you ready to start?

Regards,

Name: Esther Njeri Kamau.

Sign:

Date:

APPENDIX III

Questionnaire

Client Code: Age: Sex: Ethnicity.....
 Facility..... Diagnosis: Residence:

Part I Quality of Care

i. Timeliness of Services:

1. How did you travel to the health facility?
 1) Walk... 2) Public...3) Motorbikes...4) Taxis...
2. How long did it take you from home to the clinic?
 1) 30 min..... 2) 31min-1hr.....3)1-2 hrs..... 4) 2hrs.....
3. How much time did you take to receive all healthcare services?
 1) 30 min.....2)31min-1hr..... 3)1-2 hrs..... 4)2hrs.....

ii. Patient Centeredness:

4. Did the clinician give you enough time to explain all you wanted to say? 1) Yes..... 2) No.....
5. Did the clinician seem to understand your problem? 1) Yes.... 2) No...
6. Were you able to ask questions about your health? 1) Yes... 2) No...
7. Did you understand all the clinician explained to you? 1) Yes... 2) No...

iii. Effectiveness

8. Did the clinician examine you physically? 1) Yes.... No.....
9. Were laboratory tests requested? 1) Yes... 2) No...
10. Do you feel like you got the right medication? 1) Yes..... 2) No....

iv. Equity

11. Did you feel like you were treated fairly like other patients?
 1) Yes..... 2) No.....

12. Any areas of discrimination :

1) Nationality.....2) Gender..... 3)Economic class..... 4) Others.....

v. Patient safety:

13. Do you fear any harm may occur when being treated at this facility?

1) Yes..... 2) No.....

14. Did you get harmed in any way? 1) Yes...2) No....If yes specify....

vi. Efficiency

15. Do you feel like the mentioned resources were used well?

a) Laboratory: 1) Yes..... 2) No.....

b) Drugs: 1) Yes..... 2) No.....

Part II Cost of Treatment:

Direct Medical Cost	Description	Quantity	Price	Total
Diagnosis	Consultation			
	Laboratory			
Drugs	1			
	2			
	3			
Total direct medical costs				

Overhead (indirect) costs		Annual costs		
		Annual Office costs	Actual clinic costs	Average cost per client=TC/pts
Capital items	Desk, chairs, coach and screen			
	Bp machine, stethoscope			
	Computer			
Rent	Office Rent			
Salaries	Clinician			
	Nurse			
	Program Manager			
	Human resources			
	Admin Manager			
	Cleaning services			
Other fees	Medical license			
	Medical certificate			
	professional indemnity			
	Stationary			
	Communication			
	Internet			
	Waste disposal			
Total overhead costs				
Average overhead cost (total costs/number of clients)				

Cost summary	Total	
Total direct medical cost		
Total overhead (indirect) cost		
Total cost of Treatment		

APPENDIX IV

Research Authorization

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349, 254-020-2673550
 Mobile: 0713 788 787 , 0735 404 245
 Fax: 254-020-2213215
 When replying please quote
 secretary@ncst.go.ke

P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Our Ref: **NCST/RCD/12A/013/131**

Date: **22nd August, 2013**

Esther Njeri Kamau
 Kenyatta University
 P.O.Box 43844-00100
 Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application dated **2nd August, 2013** for authority to carry out research on *"Cost and Quality of Healthcare Services Provided to urban Refugees Through In-house and Outsourced Health Facilities in Nairobi, Kenya,"* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **31st October, 2013**.

You are advised to report to **the County Commissioner, the County Director of Education and the County Coordinator of Health, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DEPUTY COMMISSION SECRETARY
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Copy to:

The County Commissioner
 The County Director of Education
 The County Coordinator of Health
 Nairobi County.

APPENDIX V

Research Permit

PAGE 3

Research Permit No. NCST/RCD/12A/013/131

Date of issue 22nd August, 2013


Fee received KSH. 1000

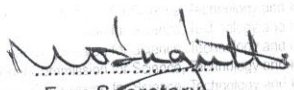
THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Esther Njeri Kamau
of (Address) Kenyatta University
P.O.Box 43844-00100, Nairobi.
has been permitted to conduct research in

Location:
District:
County:
Nairobi

on the topic: Cost and Quality of Healthcare Services Provided to urban Refugees Through In-house and Outsourced Health Facilities in Nairobi, Kenya.

for a period ending: 31st October, 2013.


Applicant's Signature


For: Secretary
National Commission for Science Technology & Innovation