

QUALITY OF HEALTH CARE AND ITS EFFECTS ON THE UTILIZATION OF MATERNAL AND CHILD HEALTH SERVICES

A CASE STUDY OF THE KISUMU MUNICIPAL HEALTH FACILITIES

BY

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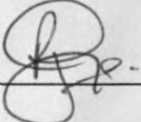
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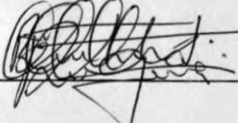
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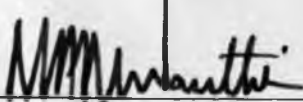
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DEDICATION :

This thesis is dedicated to my wife Cecilia, and my sons Bruce and Tony for their sacrifice and endurance while I was away pursuing my course, my farther and late mother for their encouragement and inspiration during my up-bringing.

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LIST OF ABBREVIATIONS.

AIDS	- Acquired immunodeficiency syndrome.
HIV	- Human immunodeficiency virus.
EPI	- Expanded program on immunization.
KEPI	- Kenya expanded program on immunization.
IMCI	- Integrated management of childhood illnesses.
WHO	- World Health Organization.
UNICEF	- United Nation Children's Fund.
MOH	- Ministry of Health
DMOH	- District Medical Officer of Health.
MMOH	- Municipal Medical Officer of Health.
PMO	- Provincial Medical Officer.
MCK	- Municipal Council of Kisumu
DSRS	- Department of Standards and Regulations.
KQM	- Kenya Quality Model.
MCH/FP	- Maternal and Child Health/Family Planning.
ORT	- Oral Rehydration Therapy.
ARI	- Acute Respiratory Infections.
KSPA	- Kenya Service Provision Assessment.
NGO	- Non-Governmental Organization.
STI	- Sexually Transmitted Infections.
CDD	- Control of Diarrhoeal Diseases.
RH	- Reproductive Health.
UON	- University of Nairobi.
HSM	- Health Service Management
RCO	- Registered clinical officer
RN	- Kenya Registered nurse
CI	- Confidence interval
KDH	- Kisumu District Hospital
PGH	- Provincial General Hospital

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ABSTRACT:

The study was done to assess the quality of care provided by the Kisumu Municipal health facilities as perceived by the community and from the professional perspective, with special reference to maternal and child health services. It was a descriptive cross-sectional survey, with data collected from household and exit interviews of women in the reproductive age group of 15-49 years who were living within the Municipality. Data was also collected from the Municipal facilities using a prepared checklist.

A total of 482 and 196 mothers were interviewed in the household and exit interviews respectively.

Utilization of Municipal facilities was found to be low, with 40.4% of the respondents using them for ANC services, 53.7% for immunisation, and 45.7% for pediatric clinical services. Of the other facilities, there was high utilization of the Provincial and District hospitals, which are MOH facilities.

About 70% of the respondents had by-passed Municipal facilities for at least one of the three services in their last attendance of such a service. For specific services, the by-pass rate was 59.5% for ANC, 46.3% for immunization and 54.3% for pediatric clinical services. By-pass rate was high for the urban catchment areas than the rural catchment areas. There was association between the socioeconomic status and by-pass rates, with the higher social class more likely to by-pass than the lower social class. The main reasons given for by-pass were poor care (37%), lack of drugs, vaccines/supplies (30%) and lack of/poor laboratory services (21%).

Results on the respondents perception of quality of care showed that majority of the mothers were satisfied with the providers competence, attitude and the communication process that took place during their interaction, but that there was lack of privacy in the consultation rooms and that most providers were not thorough in their physical examinations. There was also a general satisfaction with the infrastructure including cleanliness and quality of buildings.

The areas that the respondents want to be improved are drug availability (69.6%), laboratory services (46.4%) and more staff (23.5%).

Overall, the respondents had a low opinion of the quality of care offered in the Municipal facilities as shown by the mean quality index from the household interview. Only four facilities out of eleven had a mean quality index more than half of the maximum possible score of 17. Again, only 19.3% gave the overall quality rating of "good".

Utilization of ANC and Immunization services were significantly associated with the perceived quality of care while perception does not influence utilization of child treatment services.

From the facility audit, most of the facilities had reasonable capacity to offer basic health care with only 3 facilities out of 11 scoring less than 50% before weighting and 4 facilities scoring less than 50% after weighting. The worst scores were in availability of drugs, equipment and management issues. There was however over-employment of both technical and support staff as compared to the workload, which was very low. Most of the staff is in dire need of in-service training in the areas of reproductive health.

There was however no association between utilization of MCH services and the capacity of the facilities to offer care.

By-pass and over-use of Municipal facilities is significantly associated with perceived quality of care, while they are not influenced by the capacity of the facilities to offer care.

CONCLUSION: There is under-utilization of Municipal health facilities due to the low opinion the community has on the quality of care they provide and that this perception is influenced by the respondent's socioeconomic status especially education.

RECOMMENDATION: The Municipality should improve on supplies, equipment and medicines, rehabilitate and maintain the physical facilities, establish continuous education for staff and set up a Health Management Board to oversee the running of health services.

1: INTRODUCTION.

1.1. BACKGROUND INFORMATION.

The provision of health services in Municipalities and Cities has historically been a shared responsibility between the Ministry of Health and the Urban Councils. It is stipulated in the Public Health Act (Cap. 242 of the Laws of Kenya) that the provision of health services in the country is the responsibility of the Central Government. However, for effective management of health delivery services, the Central Government delegated some of the responsibilities to the Local Authorities or Urban Councils and retained the responsibility to develop and manage District and Provincial Hospitals.

There was a change in 1970 when the Ministry of Health took over the management of all health facilities in the country from local authorities except Nairobi, Mombassa, Nakuru, Kisumu and Eldoret. These municipalities therefore continued to meet the objectives of providing quality health services for their urban residents as set in the Public Health Act.

Urban migration is meanwhile proceeding rapidly all over the world. It is projected that by the year 2020, more than half of the population of the developing world will live in cities and towns (World Bank 1995). In 1960, less than 22% of the population of low to middle income countries was urban. By 1990, that population had increased by roughly half to 34%. Yet even as cities increasingly became the nexus of economic and population growth, they do not deliver on the promise of better quality of life and services to the extent they should. Millions of urban residents do not have access to portable water, basic sanitation is often lacking and access to health services and education is wanting in many cities.

The selection of urban health as the subject of the Technical Discussion at the forty-fourth World Health Assembly was a highly significant turning point and marked the explicit recognition of this issue. It indicated a distinct shift away from the pre-occupation with the problems of the rural health

to recognition that there is an impending urban crisis in health and that problems of rural and urban areas are interrelated and indivisible.

There are now many initiatives for improving health in urban areas, like “Healthy Cities” project of the WHO Regional office for Europe, and such associations as Metropolis (World Association of Major Metropolis), Citinet, (a regional network based in Asia and the Pacific of City Authorities) and Non-Governmental organisations concerned with the management of human settlements, and other International and National Public Health Associations.

Primary health care, comprising both preventive measures and curative facilities at neighbourhood level, though often a statutory Municipal function, has not generally been well targeted at or adapted to urban poor neighbourhoods. As a result, the urban poor lack access to health care.

The World Health Organisation (WHO) Global Strategy for Health for All by the year 2000 identifies primary health care as the key to achieving the goal of health for all. The declaration of Alma Ata identified the following eight activities:

- Health education
- Food supply and proper nutrition
- Provision of safe water and basic sanitation
- Maternal and child care
- Immunisation
- Prevention and control of endemic diseases
- Basic treatment of health problems
- Provision of essential drugs.

In Kenya, according to the Ministry of Health National Health sector strategic plan 1999 – 2004, the over arching goal of services delivery is to provide essential priority packages which are acceptable.

affordable and accessible to all Kenyans at all levels while creating an enabling environment for other stakeholders, including the Municipalities, to contribute to reduction of the burden of disease and unmet needs.

The high priority packages are:

- Malaria prevention and treatment package
- Reproductive health package HIV/AIDS/TB prevention and management package
- Integrated management of childhood illnesses (IMCI) package
- Expanded program on immunization (EPI)
- Control and prevention of major environmental health related communicable diseases such as cholera, Typhoid and dysentery as well as food safety.

From these strategies, it is noted that emphasis is put on issues concerning women and children's health (maternal and child health) in trying to improve the health status of the population. They are also the most vulnerable to the adverse environmental conditions and related diseases brought about by rapid urbanisation.

For the desired, favourable outcomes of these interventions to be felt, the communities for whom they are meant must utilise the available services. Studies have shown that there is a significant need for these services, but their demand depends on the quality of service provided. Poor quality works to shift or discourage demand, (Obonyo et al 1993).

1.2. QUALITY OF CARE:

1.2.1. Definition

Quality of care is difficult to define. The term is generally considered an evaluative statement (judgement) of the process of care. No single comprehensive definition has evolved over the years.

The following four examples of health care definitions illustrate the evolution of the thinking over the past sixty years as presented by Willy DeGeyudt (World Bank, 1995)

- Good medical care is the kind of medicine practised and taught by the recognised leaders of the medical profession at a given time or period of social, cultural and professional development in a community or population (Lee and Jones 1933, pg. 6).
- Standards of quality of care should be based on the degree to which care is available, acceptable, comprehensive, continuous and documented, as well as on the extent to which adequate therapy is based on an accurate diagnosis and not on symptomatology (Esselstyn, 1968).
- Quality of care is the degree to which health services for individuals and populations increases the likelihood of desired outcomes and is consistent with current professional knowledge (Institute of Medicine 1990 pg. 4).
- Total quality management is a management process of continuous improvement – process of continuously striving to exceed customer expectations (Melum and Sinioris 1992 Pg.2.)

Donabedian (1980, 1982, 1985), the most renowned expert on quality, points out that the basic components of care are both the technical quality of care such as providers behaviour in making interventions and applying technology and the management of the interpersonal process. The interpersonal elements of quality are judged as good or bad according to how the care complies with social norms, ethical, standards, client's expectations and amenities. There are also social elements

of quality that are non-clinical in nature including accessibility of the services, the efficiency with which they are delivered and the convenience of using the services (Newbrander, 2000).

1.2.2. History of Quality of Care:

Concern for quality of care is as old as medicine itself. Individual practitioners from Hypocrates to Florence Nightingale have recorded their observations of poor quality care and made recommendations for improvement (Wright et al, 1992).

The first formal systems for the assurance of quality care however developed alongside the general professionalisation of medicine, nursing and other health professions. As early as the 16th century, the Royal College of Physicians made reference in its founding charter to the need to “uphold standards for public benefit”. In most cases, the colleges and other professional associations took their responsibility for “upholding standards”, to include regulation of education and training, control of admission and development of powers of dismissal from the profession on grounds of malpractice. The Royal College of Nursing set up the “Standards of Care” project in 1965, while the Royal College of General Practitioners launched the “Quality Initiative” in 1985.

It is clear from the above that both Government and professions have now recognised the importance of quality assurance in health care. In Kenya, there are various professional associations responsible for the maintenance of standards and ethics in the practice of their respective members. Some of these are Kenya Medical Association, National Association of Nurses of Kenya, Kenya Clinical Officers Association etc. There are also legally constituted bodies, established through the Act of parliament to regulate and control the practice of doctors, dentists and nurses. These are The Kenya Medical Practitioners and Dentists Board, and The Nursing Council of Kenya. The Ministry of Health has been overseeing quality care in the country through these bodies.

Recognising the continued need and importance of improving quality of health services in the country, the Ministry of Health established the Department of Standards and Regulatory Services (DSRS) in the year 2000. The department has developed the Kenyan Quality Model (KQM), which provides a framework for Quality improvement in Health care in Kenya.

The Kenya Quality Model is designed to integrate two quality improvement approaches. Firstly, a standards approach to ensure delivery of safe and effective health services, and secondly, the gradual introduction of quality management to health managers and service providers (Mboya et al 2001).

1.2.3. Importance of Quality Care:

The main objectives of improving quality care are:

- To comply with societal commitments.

Society in all cultures has entrusted the medical profession or its equivalent with the authority and power to prolong life, to relieve stress, to restore function, and to prevent disability and unnecessary deaths. The discharge of this public trust must be bolstered by quality assurance measures.

- To enhance efficiency in using existing resources in all countries as resources available for the health services has continued to decline.
- Protecting the health of the public through less individual variations among physicians in the use of diagnostic and therapeutic procedures, the appropriate introduction, diffusion and use of new technology, reduction in medically unnecessary procedures, and applying effective public health measures.
- Monitoring and ensuring that the quality of service provided to the patients and to the community meets the criteria of fiduciary responsibility for the assigned human, financial and technical resources.

- Quality assessment has an educational purpose. It forms the basis for research, provides the teaching materials for continuing education of health care professionals, and defines the role and the responsibility of the patient in the process.

1.2.4 Dimensions of Quality of Care:

These can be grouped into three broad categories:

1. Technical aspects including:

- Accuracy of diagnosis
- Efficacy of treatment
- Excellence according to professional standard
- Necessity of care
- Appropriateness of care
- Continuity of care
- Consistency

2. Interpersonal aspects including:

- Patient satisfaction
- Acceptability of care
- Time spent with provider
- Attitudes of provider and treatment by staff
- Amenities

3. Social aspects including:

- Efficiency
- Accessibility

From these elements, it is evident that quality is determined not solely by professional service providers but also by patients and society perception.

1.2.5 Framework used in describing quality of care:

Although there is not a common definition of quality care, there has been close to universal agreement on a basic conceptual framework for assessing quality.

A. Donabedians (1966, 1988) framework

This has been accepted and modified by others. He proposed three categories into which service could be characterised; and also noted that these describe approaches for gathering and analysing information about quality rather than being actual attributes of quality.

I. Structure

Structure denotes the attributes of the setting in which the provision of health care occurs. They are inputs, which are concrete, measurable and often visible. These include:

- Physical inputs – grounds, buildings, equipment, pharmaceuticals, storage facilities, furniture, medical and office supplies etc.
- Personnel – quality and quantity of health staff and supportive personnel.
- Financial resources – budget to operate services.
- Organisational Structure – administration structure.

II. Process:

This incorporates all aspects of the performance of activities of care and include:

- Functions – prevention, diagnosis, treatment, screening, follow up.
- Patient and provider compliance.
- Programmes – EPI, ORT, ARI, MCH/FP.

- Support tasks – planning, training, supervising, financial management, logistics, and community mobilisation.

III. Out-come:

This denotes the end results of care/service and includes:

- Morbidity
- Mortality
- Functional Impairment
- Pain and suffering
- Patient satisfaction
- Behavioural change.

All the 3 categories need to be considered to obtain a balanced view of quality of care.

B. Juran / Maxwell framework:

These are frameworks developed for health from a number of industrial and other sources.

- Timeliness of care – include access, waiting time and action time.
- Information – clarification by answering what, why, how, when and who.
- Technical competence – includes medical knowledge, skills and expertise, ethics, technology, completeness and success of treatment.
- Personal interaction with practitioner/client – include courtesy, respect and bedside manner.
- Environment – include buildings, cleanliness, and amenities.

1.2.6 Methodologies for assessing Quality.

Indicators of quality can be measured using three methods of data collection (measure evaluation project – 1999, Vol.2).

1. Facility audit with selected questions to programme/facility manager.
2. Observation of client – provider interaction and selected clinical procedures.
3. Client interviews – either exit or household interviews.

Each instrument contributes information that may be used to create a more comprehensive picture of quality of care in a given set of facilities. The facility audit is used to determine the readiness of each facility to serve the client. Information is collected about types of services provided, types and amount of supplies in stock, the condition of the facility, and the types of records kept. In observation, a person with clinical training follows the client and evaluates the performance of the provider during the care giving sessions – clinical, counselling or procedures, thereby collecting information on technical competence of the provider.

Client interviews collect information about the clients experience at a given health facility. It provides information about the quality of services received from the client's perspective. Household survey has the advantage of capturing even people not attending care in the facility and therefore their views are free from courtesy bias. It has been observed that clients are likely to report that they feel satisfied with the services that they have received and will not speak negatively about the clinic or clinic staff during exit interviews. Exit interviews on the other hand are cheap and quick and clients have fresh memory of the experiences.

1.3. STATEMENT OF PROBLEM:

The rapid urbanisation in Kenya has been coupled with increased population growth and worsening poverty. It is estimated that 50% of urban population world-wide live in conditions of extreme deprivation with poor housing, water and sanitation facilities. This has led to adverse health consequences like increased morbidity and mortality from communicable diseases including HIV/AIDS, chronic diseases, drug abuse and crime (WHO, 1992).

There has often been an assumption that, because there is a high concentration of health facilities in the towns and cities as compared with rural areas, there is no urban health problem. However, for the poor and especially those living in slums and shantytowns, the level of access to health facilities falls below the minimum equitable level. Where primary health care facilities are available, their location, resources, quality and performance are often poor, their links to deprived communities are inadequate and their utilisation is low (WHO, 1992).

Kisumu Municipal Council operates twelve (12) health facilities providing preventive, promotive and curative services. Over the years, it has been observed that the workload or attendance rate continues to decline. At the same time, the Kisumu District Hospital and Nyanza Provincial Hospital, which are referral hospitals, continue to be congested with people seeking all kinds of services including those that could be easily and cheaply handled at Health centres and Dispensaries. For example, in the period July 2001 to June 2002 the Provincial and District hospitals combined had an outpatient attendance of 131,674, excluding those attending special referral clinics, while all the Municipal facilities had a total of 96,193.

The council, which has been recommended for upgrading to city status, is meanwhile in perennial financial and political problems, which hamper provision of services. Revenue collection continues to shrink due to poor collection strategies and corruption. The council is unable to service its debts running to the tune of Ksh.500 million. It is also unable to meet effectively its recurrent expenditures like staff salaries, which is always in arrears.

This study was therefore designed to investigate the reasons for the low attendance in the health facilities and if with all the problems facing the council, they are still able to offer quality health services to the residents. It also determined the factors that influence the demand for health services and the important decision variables for users choosing a health provider.

1.4. RATIONALE/JUSTIFICATION

As discussed above, rapid urban migration has led to poor environmental conditions and poverty. Women and children are the most disadvantaged in this scenario and hence health programmes targeting them should be strengthened.

The WHO concept of primary health care recognises that health care should be planned to optimise the use of resources available and that quality standards must be met at all service delivery points.

Kisumu Municipal Council is therefore expected to offer quality health care to meet the high expectations of the residents and also meet the goal and mission of the Ministry of Health and Kenya Government.

The study highlighted the quality of care provided by the municipal health facilities, both from the professional and client perspectives, and its affects on the utilisation of these facilities/services, with special reference to maternal and child health services.

This information would hopefully be used to make recommendations on how to increase coverage of the offered services in a resource-poor setting and also to draw the attention of those concerned, including the Ministry of Health, to take appropriate action to improve the situation.

1.5. OBJECTIVES:

1.5.1 General Objective:

The general objective was:

To assess the quality of care provided by the Kisumu Municipal health facilities.

Specific Objectives:

1. To determine the community's perception of the quality of care provided at the municipal health facilities.
2. To assess the capacity of the health facilities to offer quality care with emphasis on MCH services.
3. To determine the utilisation of MCH services at the Kisumu Municipal health facilities by Kisumu residents
4. To relate the perception of quality of care and the utilisation of the services.
5. To make recommendations on the improvement of quality of care in the said facilities.

1.5.3 Research Questions

1. How does the community perceive the quality of care proved by the Municipal health facilities?
2. Does this perception affect their utilisation of the MCH services at the facilities?
3. Do the facilities have the capacity to offer quality services?

1.5.4. Null Hypotheses

1. Utilisation rate is not significantly related to, a) Perceived quality of care
b) Capacity of the facilities to offer quality care.
2. Ever use of municipal health facilities is not significantly influenced by perception of quality of care, other factors being equal
3. By-pass of municipal facilities is not influenced by the perceived quality of care.
4. By-pass is not influenced by the capacity of the facility to offer services

2. LITERATURE REVIEW

Several studies have been done on quality of care both in urban and rural health services. From past studies on patient attitudes and perceptions of quality of care, a consistent finding has been that the community evaluates the adequacy of health services in two ways.

1. The availability of medical supplies and equipment especially drugs, as well as items such as x-ray services, laboratory tests, dressings, bed linen etc.
2. Acceptability of the experience of obtaining care including factors like reasonable waiting time, cleanliness of waiting places and toilets, well painted walls etc.

Patients rating of these factors are critical in determining the attractiveness of services. Poor rating of services is likely to lead to a shift from use of the health facilities in addition to patient and community complaints (Obonyo et al 1993).

In the 1999 Kenya Service Provision Assessment (KSPA) survey, which measured the capacity of the facilities to serve clients through facility inventory and interviews with health workers, only about a third of the facilities had all the basic equipment while inadequate supplies such as drugs, vaccines and contraceptives was a common feature. There was also concern on training of staff (in service), infrastructure and supervision.

In a study on patient's perception of quality of care at MOH hospitals (Obonyo et al 1993), exit surveys were conducted with patients using MOH facilities. Overall, most patients (93.1% of outpatients and 96.79% of inpatients) felt that the quality of services were rated good to fair. Some out-patients (38.24%) and in-patients (22.5%) of respondents indicated however, that the most important thing requiring improvement was availability of drugs. The second and third most important things to improve included additional staff and cleanliness.

According to the Nairobi Area study (NAS) (REACH 1988), the critical areas of weakness in the health system were identified as:

- The under-utilisation of physical facilities
- Man-power development and shortage
- Management systems weak
- Patient flow and
- Area-wide organisation and co-ordination.

The strategic Health Plan for the Nairobi area (1992) reported that a majority of Nairobi residents used the city council health facilities (60%) more than any other category of facility (MOH, Private, Mission). Other findings regarding the level of preventive/promotive services were that:

- The number of service delivery points (SDP), are more than adequate
- Utilisation of MCH/FP services low
- Professional staff larger than necessary (ratio of MCH/FP nursing staff to target population was 1:1400, approximately double that required).
- The scope, effectiveness and efficiency of preventive/promotive services need improvement.
- Inefficient equipment was noted to be a major problem affecting the effectiveness of these health facilities – either lacking or out of order.

In the focus group discussions with some groups selected from resident communities, all members of the groups felt that the services could be improved if drugs and medicines were available. They would like to have specialised services such as laboratory and x-ray available at their facilities.

A client satisfaction tool has been developed from a study done at the University of Free State (Abdul et al, 2000), and showed that client satisfaction depends on:

- Factors related to clinical aspects of health care e.g. correct diagnosis, explaining illness to client etc.
- Factors related to the humanness of care and personal demeanour of the clinic personnel, such as being caring and friendly etc.
- Factors related to the management of care in clinic such as waiting time, availability of medicines etc.
- Factors related to the physical facilities within which caring/treatment takes place, such as seating area, cleanliness, ventilation etc.

Abdul concluded that the client satisfaction tool provided useful factual information that helped clinic staff to discuss the problems, workout solution and strengthen team spirit for quality care.

'A Quality of care Beneficiary Assessment Study' was commissioned by World Bank in Zambia (1992) designed to provide preliminary indicators of the extent of the differences in quality of care provided in rural and urban areas and the differences in perception of quality of care issues expressed by beneficiaries. Results indicated a need for quality assurance in that rural areas complained of problem of distance and lack of staff, and urban areas complained of shortage of drugs and poor staff attitudes (WHO 1994).

The input of quality on utilisation was shown in a UNICEF (1995) Bamako initiative baseline study of public sector primary health care services. This study found that, in one district in Pakistan, the community saw no value in using local health facilities for necessary care due to the low quality of care there; only 5% of sick children were taken to local health facilities for treatment.

In a study of rural health facilities in Papua New Guinea (Gayner, et al, 1990), the private mission health centres were found to have a higher quality of care than the Government health centres. The study used structural indicators to assess quality. It reviewed the performance of the health centres

in basic but essential tasks, such as immunisations, and in adherence to treatment protocols, as well as assessing their staffing, equipment and facilities. Two explanations for their ability to offer higher quality care were that the mission health centres had more staff and used more money to operate. They also had better communication, supervision and maintenance.

A cost study of government facilities (Fabricant et al, 1994) used structural indicators and found that the reference private Mission facilities provided higher quality care based on those indicators. The higher quality was evidenced by fewer drug stock-outs, better-trained and supervised staff, more functional essential equipment and better maintenance of the equipment and facilities. The demand for health services was much greater in part due to their higher quality, and they drew their patients from a much wider geographical area than the comparable government facilities.

The willingness of users of health services to pay for quality has been studied. In general, it has been found that quality of care is important in determining user demand and utilisation patterns for health care providers. For example, Denton et al (1991) examined the question of how quality changes would affect demand for health services and found significant increment in demand. Patients were willing to pay for these quality increases. Improvements would have a larger impact on increasing demand than lower prices. However, these findings were not observed changes but simulations from the data.

Wouters (1991) reviewed a number of the studies of willingness to pay for health services. The demand studies suggested that quality was an important decision variable for users choosing a provider and that they were willing to pay for quality improvements. Since those studies relied on structural assessments of quality, they found that the most important variable was the availability of

drugs. There was a much weaker relationship between choice of provider and other aspects of quality such as amenities, properly maintained facilities and type of provider.

The WHO study group on Primary Health Care in urban areas in their report on the role of health centres in the development of urban health systems cites experience in different countries (WHO, 1992) as follows.

1. In 1990, the Dar es Salaam urban health project was established with the aim of promoting high quality decentralised health care management. An analysis of health service utilisation rates led to the identification of geographical areas where populations are under served. In order to improve access to, and coverage of health services, first contact health units (local dispensaries and health centres) were renovated and equipped to enable them to handle most of the common diseases, thus easing the burden on the hospitals. In order to promote integration, emphasis is placed on the co-ordination of health activities by all relevant institutions.
2. In Bombay, an examination of the pattern of health service utilisation by the urban poor revealed that a large majority of them use health services in the private sector for minor ailments. In part, this was due to widespread unawareness of the existence of health posts because of poor trained staff, and to problems in planning and management. In addition, emphasis on family planning and immunisation has led to neglect of other areas.
3. In Dakar, (Senegal) coverage by health centres is still very uneven and access to primary health care is greatly hampered by geographical factors. Health Centres are not adequately equipped to offer more than health posts (dispensaries) do, while there is no first referral hospital, and the University teaching Hospital is overwhelmed with inappropriate cases as a result. There is a political will to decentralise services, but it is proving difficult to do so.
3. In Cali, Columbia's third largest city, there has been a deliberate effort on the part of the local health authorities to reduce pressure on the university hospital. An initial survey of the use of

ambulatory facilities showed that the health centres were under-utilised, while the University hospital was mainly engaged in procedures of a fairly elementary kind. To remedy this, five strategically located centres were chosen to offer 24 hour medical attention, their diagnostic facilities were upgraded, delivery rooms for low risk pregnancies attended by trained nurse midwives were opened, and a surgical programme for outpatient and short stay day surgery was started. These upgraded health centres have become the cornerstones of the health care delivery system.

Year	1980	1981	1982	1983	1984
Population	1,000,000	1,050,000	1,100,000	1,150,000	1,200,000
Health Expenditure	100	120	140	160	180
Number of Health Centres	50	60	70	80	90
Number of Hospital Beds	1000	1200	1400	1600	1800
Number of Health Workers	1000	1200	1400	1600	1800

3. METHODOLOGY

3.1.1. STUDY SITE:

The study was conducted within the Kisumu Municipal Council in Kisumu District, Nyanza Province. The District is mainly inhabited by the Luo community, but the municipality is cosmopolitan with members of all communities who have moved in with the urbanisation. The Municipal boundaries extend well into the rural areas.

3.1.2. KISUMU DISTRICT/MUNICIPALITY PROFILE

Kisumu Municipality occupies Winam Division of Kisumu District. Kisumu District is one of the twelve (12) Districts in Nyanza Province and is the Provincial Headquarters. The District has a total population of 539,966 people of which 21,599 and 97,194 are estimated to be children below one and five years respectively. Of the total population, 353,254 people are in the Municipality or Winam Division.

Table 3.1. Population by Division, Number of Household, Area and Density (2002)

Division	Total Pop.	<5 Years	HH	Area (km ²)	Density
District	539,966	97,194	123,341	918.5	549
Winam	353,254	63,586	82,834	395.1	837
Maseno	69,915	12,585	15,170	168.7	411
Kombewa	64,432	11,598	14,289	192.1	333
Kadibo	52,267	9,426	11,048	162.7	319

Note: Population Projection from 1999 census figures considering growth rate of 2.3%

The General Fertility Rate (GFR) of the District is 172/1000 while the Infant Mortality Rate (IMR), Under 5 Mortality Rate (U5MR) and Maternal Mortality Rate (MMR) are 90/1000, 110/1000 and 200-223/100,000 respectively. The immunization coverage is 56%.

The five leading causes of outpatient morbidity are Malaria, Diseases of the respiratory system, Diseases of the skin, Diarrheal diseases and Intestinal worms. (Kisumu District Health Profile, 2002).

3.1.3. KISUMU MUNICIPAL COUNCIL

The Municipality falls under Winam Division and covers an area of 395.1 Km² with a population of 353,254 and a population density of 887 Km². The Local Authorities Act and several pieces of legislation govern the operations of the Municipality. The council's main functions are:

- Mobilize internal and external resources and, within existing regulatory framework, to divert resource towards meeting basic social needs of the population in the Municipality.
- Provide social services especially water and sewerage services.
- Infrastructure development (roads, parking spaces, houses).
- Environmental sanitation, garbage collection and disposal.
- Housing, Health, Education, welfare-markets and sports.
- Nurturing an enabling environment for the enhanced participation of the citizens in urban development.

Public Health Department:

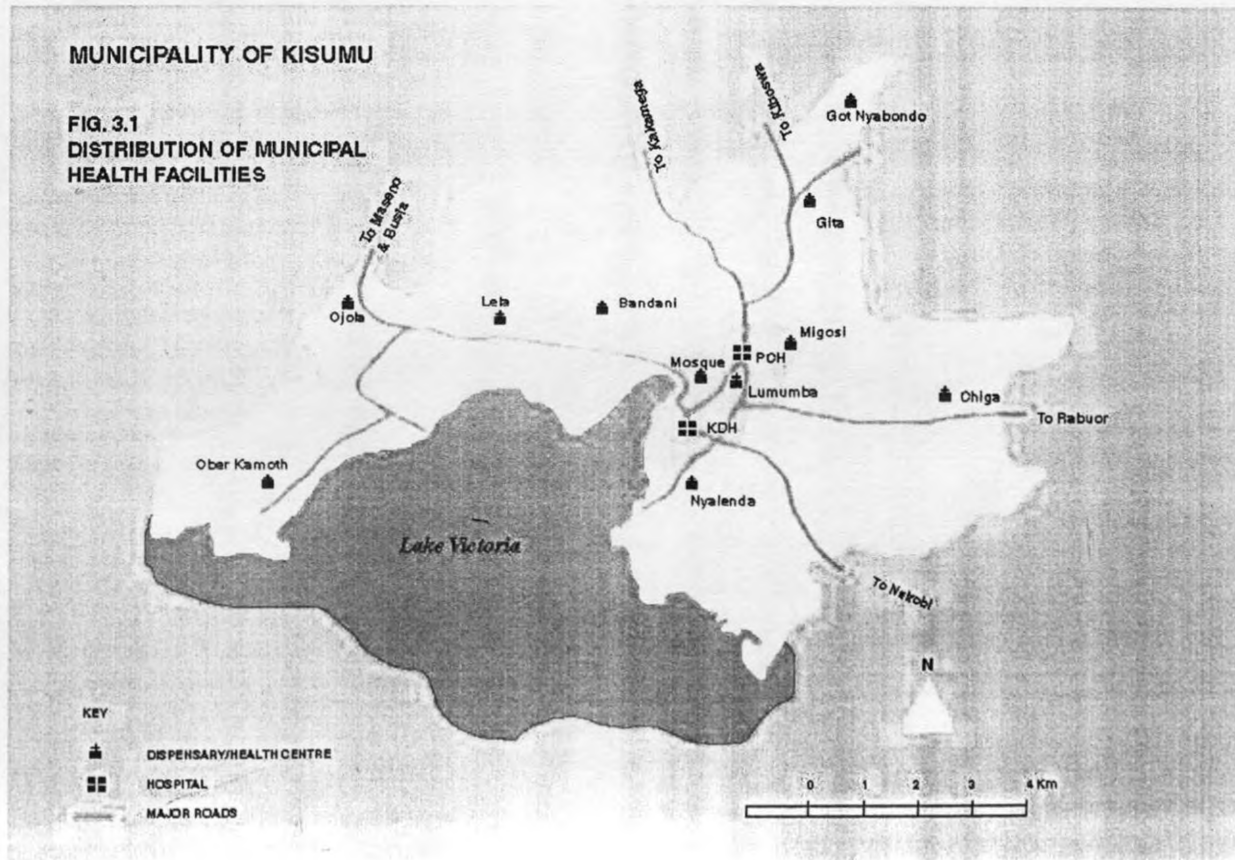
The Municipal Medical Officer of Health (MMOH) assisted by the Chief Public Health Officer, Matron and various sectional heads this.

Facilities operated by the Council:

Type	No
Hospital	0
Health center with beds	2
Health center without beds	2
Dispensaries	7
Clinics	1 (in Town Hall and mainly serves staff)

These are represented in the map overleaf (figure 3.1).

MAP-MCK HEALTH FACILITIES



3.2. STUDY POPULATION:

Data was collected from three sources, so as to give a more rounded view of quality.

1. Household Interviews with mothers in their homes from the areas selected by random sampling.

Questions mainly focused on Antenatal clinic attendance and children's immunisation and treatment attendance.

The study population was women in the reproductive age group (15 – 49) years.

Inclusion Criteria

- Women in the age bracket 15 – 49 years and have at least one child, or pregnant at the time of the survey
- Women who are residents within the area (municipality)

Exclusion Criteria

- Women outside the age bracket of 15 – 49 years.
 - Women who have never been pregnant
 - Visitors to the area/ temporary residents who have stayed for less than 6 months
- #### **2. Facility audit to determine the capacity of the facilities to deliver quality services. 11 health facilities were included in the study. Town Hall clinic, which deals mainly with council staff and immunisation of international travellers, was excluded.**
- #### **3. Exit interviews of a small sample of clients attending ANC/MCH clinics in all the 11 facilities.**

3.3. STUDY DESIGN:

The study was a descriptive cross-sectional survey:

3.4. SAMPLING:

The facility audit was done in all the 11 health facilities.

For exit interviews, systematic sampling was used where every second mother coming to the facility for MCH services was interviewed until a sample of 25 women per facility was reached. In many facilities the target was not reached due to the low number of clients. The waiting time for the interviewees was determined by noting their arrival time and the time they are through with the services provided.

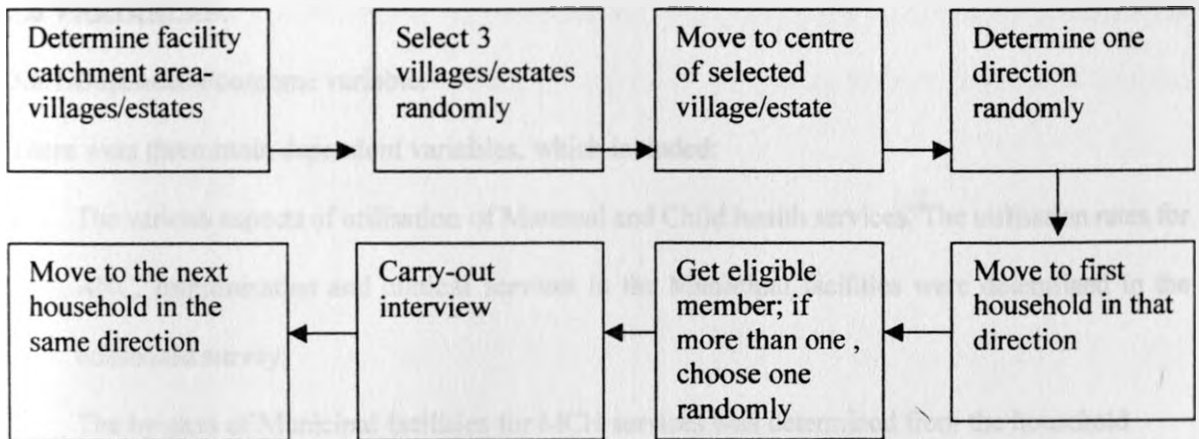
For the household survey, multistage sampling was used. The sampling unit was a woman of the reproductive age group (15-49).

The catchment area for each facility was established from the staff and outpatient registers and formed the first sampling stage. The second stage was by determining the villages or estates (clusters), in the facility catchment areas. A village/estate, which shared more than one facility was listed only once. For each facility three villages/estates were picked randomly.

The interviewers then moved to the centre of the villages/estates and randomly picked one direction in which households were to be picked for the interviews. They then moved to the first nearest household in the determined direction and conducted interviews on eligible mothers. The interviewers moved from the initial household to the next nearest in the same direction. This proceeded until a sample of fifteen women was interviewed per village/estate. If this was not achieved by the end of the village/estate in the initial direction, a different direction was taken randomly from the centre again. Where there was no eligible interviewee, the interviewer moved to the next house.

In the household only one eligible female member was interviewed. Where there was more than one, random sampling was used to pick one.

This is illustrated in the diagram below.



3.5 SAMPLE SIZE:

Since the actual utilisation rate of the facilities is not known, and to maximise the sample size, the sample size was determined based on the estimate that 50% of the residents use the municipal health facilities for MCH services and on desired precision of 5%, at 95% confidence interval, the minimum required sample size was calculated using Dobsons sample size formula for descriptive studies (Dobson 1984, Lwanga 1991)

$$n = Z^2(1-\alpha) P(1 - P)/d^2$$

Where n = sample size

α = Level of significance set at 0.05

d = degree of precision set at 5%

Z = critical value corresponding to 95% confidence interval obtained from the table of standard normal distribution = 1.96

P = estimated proportion of resident using Municipal health facilities = 50%

Substituting these values in the above formula, the sample size = 384.

3.6 VARIABLES:

3.6.1. Dependent/outcome variable:

There were three main dependent variables, which included:

1. The various aspects of utilisation of Maternal and Child health services. The utilisation rates for ANC, Immunisation and clinical services in the Municipal facilities were determined in the household survey.
2. The by-pass of Municipal facilities for MCH services was determined from the household survey and the rates computed for various facilities catchment areas.
3. Ever-use of Municipal facilities by the mothers for MCH services in the last three years was also determined from household interview and the percentages computed per facility catchment areas.

3.6.2 Independent variables.

These included the following.

1. Quality of care as perceived by respondents was determined from both household and exit interviews. It focussed mainly on the structural aspects like client-provider relationship, the providers technical competence, physical inputs like grounds, buildings, drugs and supplies and administrative issues including opening and waiting times e.t.c.
2. Quality of care from the professional or technical view was determined by assessing the capacity of the facilities to offer quality care. This was done by facility audit using a prepared checklist containing various variable categories like infrastructure, availability of basic medical equipment, drugs, vaccines, infection control facilities and other management and administrative issues. The detailed checklist is attached in appendix 1.

The staffing pattern and workload was also determined for each facility. Also determined was the in-service training for the technical staff in various areas of reproductive health, like KEPI, FP, STI, IMCI, CDD, and management.

3. In addition socio-demographic variables that may be hypothesised to influence attendance was taken including age, education status, marital status, pregnancy status, occupation, household size, type of dwelling, etc.

3.7 DATA COLLECTION:

3.7.1 Instruments:

The survey was conducted using,

1. Household questionnaire with closed-ended questions for the respondents perceived quality of care.
2. Questionnaire for exit interviews.
4. Facility audit checklist filled with the help of the facility in-charges and investigator observation.

In the household interview mothers were questioned about their nearest Municipal health facilities and where they go for MCH services and the reasons for not attending Municipal health facilities for those who do not. Those who utilise the municipal facilities were asked to rate the services using the various attributes of quality of care, from the conceptual framework adapted and modified from Donabedian and Juran. Data was also collected on the socio-demographic characteristics of the respondents.

Exit interviews were conducted on a few clients mainly focussing on staff competence and interaction with the client. The length of time taken by the clients to get treatment was also determined

The household and exit surveys were complemented by a facility audit/inventory to determine the readiness of the facilities to serve the clients, with emphasis on MCH services. Data was collected about structural attributes of quality of care including the physical infrastructure, availability of basic

equipment, drugs and other supplies, staffing and management issues e.g. staff meetings, supervision etc. Observations were made on opening and closing time of the facility, time first patient arrived and the time he/she is seen, and length of lunch-break.

3.7.2 Procedure:

After the necessary approvals, (University of Nairobi and Ministry of education), the investigator called on the Municipal MOH and Town Clerk to brief them and get their approval as well and notify the health facilities.

The District Officer of Winam Division was also briefed so that he informs the Chiefs and Sub-chiefs to mobilise the communities accordingly.

The research team was then recruited and trained on the questionnaire and interviewing techniques so as to make the interviewing standardised.

The survey was then done over a period of fourteen days, with the principal investigator supervising the teams daily. The interviewers asked all the study subjects the same questions in the manner and order using the same words. Three languages, English, Kiswahili, and Luo were used depending on which the interviewee is comfortable with.

The Principal investigator was concurrently conducting facility audit with the help of an assistant in the facilities.

3.8 MINIMISATION OF ERRORS AND BIAS

Non-sampling errors were reduced by proper training of the interviewers so that they understand the questions well. They were made to understand and be in a position to ask the questions in all possible languages– Luo, Kiswahili and English. To get the confidence of the mothers, only female interviewers were recruited. The questionnaire was pre-tested at the District Hospital for exit

interview and in a few households for the household questionnaire and any ambiguity corrected before the survey started.

The filled questionnaires were edited at the end of each day for completeness and accuracy of data. Confidentiality of information was emphasised to the respondents.

Bias was minimised by random sampling procedure. The survey program included weekends so as to get as many mothers at home as possible. The interviewers were also instructed to make return visits where women were missed.

3.9. DATA MANGEMENT

All collected data was entered into the computer and analysed using SPSS package. Data was presented in form of tables, diagrams and graphs. Descriptive statistics were determined on the respondent's socio-demographic characteristics. Rates and proportions were determined during the analysis. Statistical analysis was performed using chi square and Spearman's rank coefficient measures of association.

3.10. ETHICAL CONSIDERATIONS

Informed consent was obtained from respondents before commencing the interview. The respondents had the option to decline the interview or answering questions they are not comfortable with. The information collected was kept confidential and names of respondents were not included on the questionnaire. In particular all respondents were explained the objectives of the study.

For facility audit and exit interviews, the investigator did not participate in any procedures or interfere with patient management or smooth running of the facility.

3.11. LIMITATIONS

1. Some mothers were missed during the survey; either they had gone to work or the farms. Return visits were hampered by logistical problems.
2. Some mothers refused to be interviewed especially in the affluent estates.

4.RESULTS:

4.1.HOUSEHOLD:

4.1.1.SOCIO-DEMOGRAPHIC CHARACTERISTICS:

A total of 482 mothers were interviewed and all responded to the questionnaire, though some were undecided about some of the questions.

The socio-demographic characteristics are summarised in table 4.1 below.

Table 4.1: Sample size, mean age of respondents, marital status mean household size and mean number of under-fives in households by facility catchment

Facility catchment	Sample size of mothers	Mean age of mothers	Mean household size	Mean no. U5 in household
Lumumba	43	28	4.7	1.5
Ober kamothe	45	27	5.0	1.5
Migosi	45	26	4.9	1.3
Gita	45	27	4.9	1.5
Lela	45	26	5.0	1.5
Bandani	48	26	5.0	1.5
Nyalenda	46	26	4.6	1.4
G.Nyabono	42	28	5.9	1.6
Mosque	40	26	4.4	1.4
Chiga	41	28	5.5	1.8
Ojola	42	27	5.3	1.6
TOTAL	482	27	5.0	1.5

As can be seen above, there is minimal difference in the shown characteristics between the different catchment areas.

The respondents had a mean age of 26.8 years (SD 7.04).

The average household size of the respondents was 5 (SD 1.94), while the mean number of under-Five year old children was 1.5 per household.

About 80% of these women were married while 8.9% and 8.7% were single and widowed respectively.

The education status as per facility catchment area is shown in table 4.2 below.

Table 4.2: Education status of respondents by facility catchment.

Catchment area	EDUCATION STATUS				TOTAL
	None	Primary	Secondary	Tertiary	
Lumumba	1 (2.3%)	11 (25.6%)	22 (51.2%)	9 (20.9%)	43 (100%)
Ober K.	3 (6.7%)	33 (73.3%)	9 (20%)	0 (0%)	45 (100%)
Migosi	1 (2.2%)	9 (20%)	19 (42.2%)	16 (35.6%)	45 (100%)
Gita	1 (2.2%)	35 (77.8%)	8 (17.8%)	1 (2.2%)	45 (100%)
Lela	1 (2.2%)	23 (51.1%)	18 (40%)	3 (6.7%)	45 (100%)
Bandani	1 (2.1%)	38 (79.2%)	7 (14.6%)	2 (4.2%)	48 (100%)
Nyalenda	1 (2.2%)	24 (52.2%)	19 (41.3%)	2 (4.4%)	46 (100%)
G.Nyabondo	2 (4.8%)	32 (76.2%)	7 (16.7%)	1 (2.4%)	42 (100%)
Mosque	2 (5%)	15 (37.5%)	17 (42.5%)	6 (15%)	40 (100%)
Chiga	0 (0%)	34 (82.9%)	7 (17.1%)	0 (0%)	41 (100%)
Ojola	1 (2.4%)	35 (83.3%)	5 (11.9%)	1 (2.4%)	42 (100%)
TOTAL	14 (2.9%)	289 (60%)	138 (28.6%)	41 (8.5%)	482 (100%)

At least 60% (n=289) of the respondents had some primary level of education, while 28.6% (n=138) had been to secondary school. Only 2.9% had never been to school and therefore illiterate. The results also show a wide educational status variation. The more rural catchment areas like Chiga, Ober Kamoth, Ojola etc had majority with primary level of education while the urban catchment areas like Lumumba and Migosi had more in the secondary and tertiary level. Migosi had the highest percentage with tertiary level of education and therefore seems to be home to a higher social class.

The occupation of respondents by facility catchment is shown in table 4.3 below.

Table 4.3: Occupation of respondents by facility catchment.

Catchment area	Occupation of respondent			TOTAL
	Un-employed	Employed	Business lady	
Lumumba	20 (46.5%)	11 (25.6%)	12 (27.9%)	43 (100%)
Ober k.	24 (53.3%)	1 (2.2%)	20 (44.4%)	45 (100%)
Migosi	13 (29.5%)	19 (43.2%)	12 (27.3%)	44 (100%)
Gita	26 (57.8%)	0 (0%)	19 (42.2%)	45 (100%)
Lela	23 (61.1%)	5 (11.1%)	17 (37.8%)	45 (100%)
Bandani	22 (45.8%)	2 (4.2%)	24 (50%)	48 (100%)
Nyalenda	17 (37%)	5 (10.9%)	24 (52.2%)	46 (100%)
G.Nyabondo	16 (38.1%)	0 (0%)	26 (61.9%)	42 (100%)
Mosque	14 (35%)	7 (17.5%)	19 (47.5%)	40 (100%)
Chiga	20 (48.8%)	1 (2.4%)	20 (48.8%)	41 (100%)
Ojola	26 (61.9%)	1 (2.4%)	15 (35.7%)	42 (100%)
TOTAL	221 (45.9%)	52 (10.8%)	208 (43.2%)	481 (100%)

Again, it can be noted that more women from the urban catchment areas like Migosi, Lumumba, Mosque were in formal employment than those from rural, like Ober Kamoth, Chiga, Got Nyabondo, Ojola, etc.

At least 43% of the respondents were involved in some form of business, while 42.2% were housewives. Only 10.8% were in formal salaried employment.

The type of dwelling of respondents was also determined by observation during the survey. These are shown in table 4.4 below.

Table 4.4:Type of dwelling of respondent and house ownership.

Catchment area	TYPE OF DWELLING			HOUSE OWNERSHIP	
	Temporary	Semi-permanent	Permanent	Family	Rental
Lumumba	0 (0%)	13 (30.2%)	30 (68.8%)	1 (2.3%)	42 (97.7%)
Ober K.	27 (60%)	15 (33.3%)	3 (6.7%)	39 (86.7%)	6 (13.3%)
Migosi	0 (0%)	15 (33.3%)	30 (66.7%)	8 (17.8%)	37 (82.2%)
Gita	6 (13.3%)	31 (68.9%)	8 (17.8%)	29 (64.4%)	16 (35.6%)
Lela	5 (11.1%)	27 (60%)	13 (28.9%)	27 (60%)	18 (40%)
Bandani	3 (6.3%)	34 (70.8%)	11 (22.9%)	22 (45.8%)	26 (54.2%)
Nyalenda	1 (2.2%)	26 (56.5%)	19 (41.3%)	10 (21.7%)	36 (78.3%)
G.Nyabondo	23 (54.8%)	17 (40.5%)	2 (4.8%)	42 (100%)	0 (0%)
Mosque	1 (2.5%)	21 (52.5%)	18 (45%)	4 (10%)	36 (90%)
Chiga	22 (53.7%)	18 (43.9%)	1 (2.4%)	40 (97.6%)	1 (2.4%)
Ojola	21 (50%)	20 (47.6%)	1 (2.4%)	37 (88.1%)	5 (11.9%)
TOTAL	109 (22.6%)	237 (49.2%)	136 (28.2%)	259 (53.7%)	223 (46.3%)

KEY: Temporary—mud-wall, grass-thatched roof.

Semi-permanent—mud/plastered wall/floor, iron-sheet roof.

Permanent---stone/brick wall, iron-sheet/tile roof.

From the table, over 20% (109) of the respondents were staying in temporary houses, 237(49%) in semi-permanent houses and 136(28%) in permanent house.

About 54% of the respondents were staying in their own family house while 46.3% were staying in rental houses.

The same variation between the urban and rural differences is still manifested , with the urban mothers more likely to be living in permanent, rental houses than their counterparts in rural catchment areas.

Some 58.3% of the respondents were lactating at the time of the survey while 6% were pregnant and were therefore expected to be attending MCH clinics.

From the socio-demographic characteristics, there is a significant variation between the different catchment areas, which can be viewed as urban-rural difference. Those living in the urban catchment areas like Migosi, Lumumba, Mosque, Nyalenda, have higher level of education, more in formal salaried employment and more likely living in permanent houses. The mothers from the rural catchment areas like Chiga, Ober Kamoth, Got Nyabondo etc on the other hand have a lower level of education, un-employed or in informal business and more likely to be staying in temporary or semi-permanent family house.

4.1.2. UTILISATION OF MCH SERVICES

Mothers were asked to state where they attended ANC in their last or current pregnancy, where they took their last child for treatment, and where they attended treatment the last time their child below 5 years was sick. Table 4.5 below shows the responses.

Table 4.5: Utilisation of MCH services by facility ownership.

FACLITY	ANC	%	IMM	%	TREAT	%
MCK	184	40.4	253	53.7	209	45.7
MOH	219	48.1	171	36.3	138	30.2
MISSION	4	0.9	3	0.6	5	1.1
PRIVATE	48	10.5	44	9.3	105	23
TOTAL	482	100	482	100	482	100

From the findings, it can be noted that generally, the residents of Kisumu municipality use the municipal health facilities more than any other facility for immunisation and treatment of children. The trend is different for antenatal services. This could be because mothers would like to attend ANC where they would be able to deliver. During the interviews some respondents said they know they would be referred for delivery elsewhere so they would rather go there direct. Also, some facilities did not have formal ANC clinics, while the others were not attending to first pregnancies. Apart from two facilities, the municipal facilities do not offer maternity services, hence the high utilisation of MOH facilities, mainly Provincial Hospital and District Hospital. For immunisation services, the residents use Municipal facilities than the others combined. This could be due to the availability of vaccines, which is usually supplied by Ministry of Health through their KEPI Logistic unit. Utilisation of private facilities is low and this could be due to the high cost of treatment, especially given the high poverty level in the municipality. But more people were using private for treatment of children than for the other services. This could be due to the importance people give to illness as compared to ANC and Immunisations, which are, regarded as routine services. Mission health facilities are few within the Municipality, explaining why only a few used them.

As for individual facilities, the utilisation of the MCH services are shown in tables 1, 2 and 3 in Annex 4.

The utilisation rates (%) of Municipal facilities for the individual services are shown in table 4.6 below.

Table 4.6: Utilisation rate of Municipal facilities for MCH services by facility catchment

FACILITY	UTILISATION %		
	ANC	Immunization	Treatment
Lumumba	34.1	42.9	36.6
Ober K.	91.1	88.9	57.8
Migosi	4.4	20.5	20.5
Gita	64.9	74.4	39.5
Lela	43.2	53.3	40.0
Bandani	15.6	29.2	36.2
Nyalenda	32.6	44.4	34.9
G.nyabondo	37.1	51.3	52.6
Mosque	13.2	33.3	40.5
Chiga	78.0	89.7	78.0
Ojola	31.7	66.7	71.1
TOTAL	40.4	53.7	45.7

It can be noted from the results that the utilisation rate is low for the facilities within the urban part of the Municipality like Lumumba, Nyalenda, Bandani, Mosque and Migosi. Most of the people within these catchment areas seem to be using the Provincial and District hospitals, which are also located within the urban municipality. On the other hand, the rural facilities like Ober Kamoth, Chiga, Gita, Ojola have high utilisation rates. This could be due to lack of alternative service delivery points, given that the Provincial and District hospitals are far and transport cost high as can be seen in the map in section 3.1. Bandani, Ojola, and Got Nyabondo have very low utilisation rates of ANC services compared to the other services because they don't have formal ANC clinics and just attend to whoever comes, and then refers appropriately.

Tables 1,2 and 3 in Annex 4 also show that most of those who were not using the Municipal facilities were more likely to use Provincial or District hospitals. Further analysis showed that the distance from the two MOH hospitals from the respondent's area of residence had a bearing on which of the two facilities they would use. This is illustrated more clearly in chapter 4.4.

4.13. BY-PASS OF MUNICIPAL FACILITIES:

By-pass was defined as attending a service from a facility other than the nearest Municipal facility for any of the three MCH services.

Bypass rates of municipal facilities were determined for each service as shown in table 4.7 below.

Table 4.7: By-pass rate of MCH services.

SERVICES	BY-PASS		TOTAL
	YES	NO	
ANC	271 (59.5%)	184 (40.5%)	455 (100)
IMMUN.	218 (46.3%)	253 (53.7%)	471 (100)
TREATMENT	248 (54.3%)	209 (45.7%)	457 (100)
TOTAL	737 (53.4%)	646 (46.7%)	1383 (100)

Hence the by-pass rate for ANC and treatment is more than 50% while it is less than 50% for immunisation. A majority of the mothers therefore preferred municipal facilities for immunisation while preferring other facilities especially MOH for the other MCH services.

The by-pass rate for at least one MCH service was as shown in table 4.8 below.

Table 4.8: By-pass of Municipal facilities for MCH services by facility catchment:

FACILITY	BY-PASS		
	YES	NO	BY-PASS %
LUMUMBA	34	9	79.1
OBER KAMOTH	20	25	44.4
MIGOSI	42	3	93.3
GITA	30	15	66.7
LELA	30	15	66.7
BANDANI	41	7	85.4
NYALENDA	35	11	76.1
G.NYABONDO	29	12	70.7
MOSQUE	33	7	82.5
CHIGA	12	29	29.3
OJOLA	29	13	69.0
TOTAL	335	146	69.6

Again, the results show that there was high by-pass for the facilities within the urban area like Lumumba. Mosque, Nyalenda, and Migosi. It should be noted that the Provincial and District Hospitals are also located in the urban part of the city. The residents of these areas therefore had a choice of where to seek service. But review of records show that the two MOH Hospitals handle more patients/clients than all the Municipal facilities combined. The main reason for bypass could therefore be poor services provided at the MCK facilities. Of course the main reasons given for the by-pass were poor services, lack of drugs and supplies, and lack/poor laboratory services in that order. Those who had never attended Municipal facilities for the last 3 years gave the same reasons in the same order.

Migosi had the highest by-pass rate, yet it is one of the biggest facilities in the Town. This facility had just operated for about seven months at the time of the survey after closure for about 3 years. It had earlier been leased to private entrepreneurs who abandoned it midway. It was apparent from the interviews that the majority of the residents were not aware that it was operational. Mobilisation is therefore required as well as upgrading the services, which were also noted to be very low as shown in the facility audit results and a low quality index of 4.7 in the household survey as is presented in the later sections. From the socio-economic characteristics, Migosi had the highest percentage of the

affluent people. This could also mean that those with high socio-economic status would prefer other facilities other than Municipal facilities. They also have a choice of which facility to attend compared to the poor.

Bandani dispensary also had a similar problem in that it was relocated and the catchment area changed. Some of the residents of the new location are still not aware of its existence.

Got Nyabondo happens to be the most rural and in a very hardship area both in terms of access and infrastructure, but also had a very high by-pass rate. The nearest health facility to Got Nyabondo is actually in Rift Valley province and most of the people were going there. The facility also scored poorly in almost all the other parameters. On the day of the survey the research team arrived at 8.30 am and found a support staff waiting at the door as the nurse goes with the key and she stays in town. She latter came at around 11.30 am and opened the dispensary. On that day no patient came and we were not able to get clients for exit interview. Some of the respondents in the household interview also said that the facility operates irregularly as some days they take patients and the nurses never appear.

The education status of the respondents was cross- tabulated against by-pass of municipal facilities and results are shown in table 4.9 below.

Table 4.9: Cross-tabulation of education status and by-pass of Municipal facilities for MCH services.

EDUC.STATUS	BY-PASS		TOTAL
	YES	NO	
NONE	5 (35.7%)	9 (64.3%)	14 (100%)
PRIMARY	191 (66.3%)	97 (33.7%)	228 (100%)
SECONDARY	100 (72.5%)	38 (27.5%)	138 (100%)
TERTIARY	39 (95.1%)	2 (4.9%)	41 (100%)
TOTAL	335 (69.6%)	146 (30.4%)	481 (100%)

Chi square =22.238, df=3, p-value<0.001.

Hence education status has a positive relationship with by-pass of municipal facilities. The more educated people are more likely to by-pass municipal facilities, may be their level of awareness influence them to seek for better quality care elsewhere. It should be noted that distance to Provincial or District hospital could be a confounder here as these two facilities are situated in the urban part of the Municipality.

The occupation of the respondents was also cross-tabulated against the by-pass and results shown in table 4.10 below.

Table 4.10: Cross-tabulation of occupation of respondent and by-pass of Municipal facility.

OCCUPATION	BY-PASS		TOTAL
	YES	NO	
H/W. UN-EMPLOYED	151 (68.3%)	70 (31.7%)	221 (100%)
EMPLOYED	46 (88.5%)	6 (11.5%)	52 (100%)
BUSINESS	137 (66.2%)	70 (33.8%)	207 (100%)
TOTAL	334 (69.6%)	146 (30.4%)	480 (100%)

Chi square =10.052, DF =2, p-value =0.007,

Hence, the mother's occupation is related to the by-pass of municipal facilities. Employed women are more likely to by-pass the municipal facilities, maybe because they work in town and have better access to the facilities in town due to their financial position.

The type of dwelling of the respondents was also cross-tabulated with the by-pass of the Municipal facilities. The results are shown in table 4.11 below.

Table 4.11: Cross-tabulation of type of dwelling and by-pass of Municipal facilities for MCH services.

TYPE OF DWELLING	BY-PASS		TOTAL
	YES	NO	
Temporary	60 (55.6%)	48 (44.4 %)	108 (100%)
Semi-permanent	157 (66.2%)	80 (33.8%)	237 (100%)
Permanent	118 (86.8%)	18 (13.2%)	136 (100%)
TOTAL	335 (69.6%)	146 (30.4%)	481 (100%)

Chi square =30.293, DF =2, p-value <0.001,

Hence there is a positive relationship between type of dwelling and the by-pass of municipal health facilities. This suggests again that wealthier people are more likely to by-pass Municipal facilities. Again it should be remembered that distance from PGH and KDH is a confounder as most of the temporary house are in rural areas.

The respondents who by-passed municipal facilities for any of the three services were asked to give their reasons for bypassing and the responses are as shown in table 4.12 below.

Table4.12: Reasons for bypassing Municipal facilities

REASON	FREQ.	% all responses	% all respondents **
Poor staff attitude	14	2.4	4.2
Lack of drugs, vaccines/supplies	102	17.2	30.4
Long waiting time	23	3.9	6.9
Poor care (technical competence, physical exam., response to treatment etc.)	124	21.0	37.0
Lack of lab. services	71	12.0	21.2
Expensive	46	7.8	13.7
Long distance	31	5.2	9.0
Was not staying in town	21	3.5	6.3
Referred /don't handle complications	19	3.2	5.7
No qualified staff	12	2.0	3.6
Not aware of facility	18	3.0	5.4
No ANC services	25	4.2	7.5
Directed/influenced by family/friends	15	2.5	4.5
Hospital too small	11	1.9	3.3
Was closed	10	1.7	3.0
Other	51	8.6	15.2
TOTAL	593	100	

** Individuals giving multiple responses, hence number of respondents lower than number of responses.

The same respondents were also asked to state what attracted them to the facilities where they attended these services .The responses were as shown in table 4.13 below.

Table 4.13: Reasons for preferring attended facilities

REASON	FREQ.	% all responses	% all respondents
Better staff attitude	15	2.4	4.5
Availability of drugs/vaccines	126	19.9	37.6
Short waiting time	66	10.4	19.7
Better care	184	29.0	54.9
Lab. Services available	72	11.4	21.5
Cheap	53	8.4	15.8
Near	34	5.4	10.2
Big hospital	13	2.1	3.9
Qualified staff	14	2.2	4.2
Influenced	9	1.4	2.7
Has ANC services	6	0.9	1.8
Referred	6	0.9	1.8
Other	36	5.7	10.7
TOTAL	634	100	

The main reasons for by-pass were poor care, lack of drugs/supplies and lack of or poor laboratory services in that order. These are the same factors, which pulled them to the facilities where they attended the respective services. It seems most mothers were satisfied with the staff attitude, waiting time cost of treatment and distance.

4.1.4. EVER-ATTENDANCE OF MCK FACILITIES

The mothers were asked whether they had ever attended their nearest or any Municipal health facility for MCH services in the last 3 years.

336 respondents (69.7%) had attended while 146 respondents (30.3%) had not.

Those who had attended the Municipal facilities were asked to state how many times they had attended in the last 2 years.

Out of the 229 people (68%) who could remember, the average number of times of attendance was 3.86 (SD 2.32).

The 146 mothers who had not attended Municipal facilities for the last 3 years were then asked the reasons for their not using Municipal facilities and the responses are as shown in table 4.14 below.

Table 4.14: Reasons for not using Municipal facilities.

REASON	FREQ.	% of all responses	% of all respondents
Poor staff attitude	8	2.5	5.5
Lack of drugs/vaccines/supplies	79	24.5	54.1
Long waiting time	27	8.4	18.5
No lab. services	52	16.2	35.6
Expensive	13	4.0	8.9
Long distance	7	2.2	4.8
Poor care	83	25.8	56.8
Influence of friends/neighbours	4	1.3	2.7
Not aware of facility	8	2.5	5.5
Other	40	13.0	27.4
TOTAL	321	100	

The most important reasons were again poor care and lack of drugs/vaccines. A reasonable percentage also gave lack of laboratory services as their reason for not attending municipal facilities. The same group was asked the source of information for the reasons they gave given that they had not been to these facilities for the last 3 years. Out of 132 people who responded, 50% got the information from friends while 22% got from relatives. The rest are shown in table 4.15 below.

Table 4.15: Source of information about Municipal facilities.

SOURCE	FREQ	%
FRIENDS	66	50
RELATIVES	29	22
JUST BELIEVE	18	13.6
PAST EXPERIENCE	10	7.6
OTHER	9	6.8
TOTAL	132	100

Thus, friends play a major role in influencing health-seeking behaviour of the community, followed by relatives. Interesting though was the finding that 13.6% of the mothers had never attended the Municipal facilities from mere belief that the services were wanting.

The ever-attendance of Municipal facilities was cross-tabulated against the educational level of the respondents and the results are shown in table 4.16 below.

Table 4.16: Cross-tabulation of education status of respondent and ever-attendance of Municipal facility.

EDUC.LEVEL	EVER-ATTENDANCE		TOTAL
	YES	NO	
NONE	12 (85.7%)	2 (14.3%)	14 (100%)
PRIMARY	220 (76.1%)	69 (23.9%)	289 (100%)
SECONDARY	93 (67.4%)	45 (32.6%)	138 (100%)
TERTIARY	11 (26.8%)	30 (73.2%)	41 (100%)
TOTAL	336 (69.7%)	146 (30.3%)	482 (100%)

Chi square =43.385, df=3, p-value<0.001

Hence ever-attendance is related to education status .The highly educated are more likely not to have attended the municipal facilities.

The occupation of the respondents was also cross-tabulated against the ever-attendance of Municipal facilities and the results are shown in table 4.17 below.

Table 4.17: Cross-tabulation of occupation of respondent and ever-attendance of Municipal facility.

OCCUPATION	EVER-ATTENDANCE		TOTAL
	YES	NO	
H.WIFE	167 (75.6%)	54 (24.4%)	203 (100%)
EMPLOYED	18 (34.6%)	34 (65.4%)	52 (100%)
BUSINESS	150 (72.1%)	58 (27.9%)	208 (100%)
TOTAL	335 (69.6%)	146 (30.4%)	481 (100%)

Chi square=34.448, df=2, p-value<0.001

Again, ever-attendance of Municipal facilities is related to the occupation of the mother. Those employed are more likely not to have attended the Municipal facilities, may be due to their financial capability to seek alternative facilities.

Also cross-tabulated were the type of dwelling and the ever-attendance of Municipal facilities. The results are as shown in table 4.18.

Table 4.18: Cross-tabulation of type of dwelling and ever-attendance.

TYPE OF DWELLING	EVER-ATTENDANCE		TOTAL
	YES	NO	
Temporary	94 (86.2%)	15 (13.8%)	109 (100)
Semi-permanent	172 (72.6%)	65 (27.4%)	237 (100)
Permanent	70 (51.5%)	66 (48.5%)	136 (100)
TOTAL	336 (69.7%)	146 (30.3%)	482 (100)

Chi square=36.450, df=2, p-value<0.001

This still supports the finding that wealthier people are more likely not to have attended Municipal facility.

Socio-economic status therefore plays a big role in determining where one seeks health care.

Municipal facilities seem to be used more by the poor, who are not capable for seeking alternative care offered in other facilities mainly found in the urban areas.

In order to determine the influence of distance on by-pass and ever-attendance of Municipal facilities, the distance from the facilities to the provincial hospital were determined from the map (straight-line connection). The facilities were then grouped into two, those within 5-kilometre distance, and those beyond. A logistic regression analysis of the factors affecting by-pass was then done with distance factored in. The results are shown below.

Table 4.19: Variables associated with by-pass of Municipal facilities.

Variable	Odds ratio	95% CI	P value
Distance to PGH	0.403	0.226-0.719	0.002
Education status	15.852	2.127-118.15	0.032
Occupation	1.866	0.487-7.152	0.690
Type of dwelling	1.665	0.728-3.805	0.278

It can be seen that distance has the strongest influence on by-pass, with a p-value of 0.002. The confidence interval does not include 1, hence the effect of distance is significant.

It is apparent from the table that education status is still significantly associated with by-pass, with a p-value of 0.032 and a 95% CI that does not including 1. It can also be seen that those with no education at all are about sixteen times less likely to by-pass Municipal facility than those with tertiary level of education.

The relationship between by-pass and occupation and type of dwelling of the respondents disappear after factoring in distance as can be seen in the p-values which are greater than 0.005 and the 95% confidence interval which include 1 in both cases. But of course it was shown that distance to PGH is related to these two parameters as better houses and more employed people are found in the urban part of the Municipality.

4.1.5. PERCEPTION OF QUALITY OF CARE

The respondents who said they had utilised MCH services in Municipal facilities were asked their perception of the various attributes of quality of care. The responses are described in the following sub-sections.

4.1.5.1. Provider-client relationship:

The mothers were asked how the staff handled them the last time they attended municipal facility.

The responses are as shown in table 4.22 below.

Table 4.20a. Handling of client by provider.

RESPONSE	NO.	%
Well	219	65.2
Fair	96	28.6
Poor	21	6.3
TOTAL	336	100

Generally, it can be noted that the respondents were satisfied with the way they are handled by the health workers, with only 6.3% giving a rating of poor.

The responses to the other parameters of the provider-client relationship are given in the table below.

Table 4.20b: Perception of provider-client relationship and provider competence.

Parameter	No. of responses			
	Yes	No	Don't know	TOTAL
Provider explained problem	170 (50.7%)	164 (49.0%)	3 (0.3%)	337 (100%)
Client free to ask questions	195 (58.7%)	137 (41.3%)	-	332 (100%)
Good physical examination	155 (46.4%)	136 (40.7%)	43 (12.9%)	334 (100%)
Provider looked competent	178 (53.1%)	33 (9.9%)	124 (37%)	335 (100%)

Though the ratings look marginally satisfactory, there is concern that 49% of the clients were not explained their or their child's problem by the provider, while 41.3% of the clients did not feel free to ask the providers questions concerning their/their child's problem. Another 40.7% also felt that the providers did not do a good physical examination.

On the provider's competence, although it is encouraging that the majority of the respondents (53.1%) were satisfied, a whole 37% were non-committal, which could still suggest lack of satisfaction.

4.1.5.2. Drug availability:

The mothers were asked if they got all the drugs prescribed for them the last time they attended municipal facility. Only 113 (36%) said they got all the drugs, while 201(64%) did not get all.

The mothers were then asked their opinion on the general drug availability in the facility they attended last. The responses are shown in table 4.21 below.

Table 4.21: Mothers rating of drug availability.

Drug availability	No.	%
Good	72	21.6
Fair	169	50.6
Poor	75	22.5
Don't know	18	5.5
TOTAL	334	100

Again, only 21.6% of the mothers gave a rating of good. These findings will be more corroborated later under facility audit.

4.1.5.3 Administrative issues.

The mothers were asked about the time duration they took to be attended in the facility. The responses are as shown in table 4.22 below.

Table 4.22: Respondents perception of waiting time

Waiting time	No.	%
Short/reasonable	228	85.7
Too long	48	12.5
Don't know	6	1.8
TOTAL	336	100

Hence, the waiting time was reasonable according to the majority of the respondents. This is consistent with the earlier findings of the pull and push factors. This could be due to the low number of people attending the facilities, hence low workload.

The mothers were then asked whether the facilities open for a reasonable time during the day and gave the responses shown in table 4.23.

Table 4.23: Respondents judgement of operation time.

Operation times reasonable	No.	%
Yes	220	65.5
No	81	24.0
Don't know	35	10.5
TOTAL	336	100

The majority are therefore satisfied with the operation time.

4.1.5.4. Infra-structure.

The respondents were asked to rate the quality of the buildings and the general cleanliness of the facilities. The responses are shown in table 4.24 below.

Table 4.24: Respondents rating of infrastructure.

Parameter	Respondents rating			TOTAL
	good	Fair	Poor	
Quality of building	125 (37.2%)	160 (47.6%)	51 (15.2%)	336 (100%)
Level of cleanliness	225 (67.2%)	107 (31.9%)	3 (0.9%)	335 (100%)

Whereas the majority of the respondents were satisfied with the level of cleanliness in the facilities, only 37% rated the quality of the building as good.

4.1.5.5 Overall quality and possible improvements.

The respondents were asked to rate the overall quality of service provided at the municipal facility they attended last. The responses are shown in table 4.25 below.

Table 4.25: Respondents rating of overall quality of care in Municipal facilities:

Quality rating	NO.	%
Good	65	19.3
Fair	205	61.0
Poor	60	17.9
Don't know	6	1.8
TOTAL	336	100

From the table it can be seen that only 19.3% of the respondents gave a rating of good, while the majority (61%) gave a rating of fair. This was a subjective response as it was difficult to interpret what the respondents meant by fair. But when asked which facility they would attend if they fell sick at the time of the interview, only 49.4% said they would go to Municipal facilities as shown in 4.26 below.

Table 4.26: Facility to be attended by respondents should they fall sick.

FACILITY	FREQUENCY	%
MUNICIPAL	238	49.4
MOH	164	34.4
MISSION	3	0.6
PRIVATE	72	15.1
TOTAL	477	100

Out of the 238 respondents who would attend Municipal facilities, 135(56.7%) had earlier rated the Municipal health services as fair. This could mean that “fair” could mean satisfactory to the majority of the respondents, and satisfactory to others.

It can however be seen that less than 50% would attend municipal facilities. This is consistent with the earlier finding of an average by-pass rate of 53.1%

Of the other facilities, the majority (34.4%) would go to MOH facilities. This is also close to the average utilisation rate of MOH facilities of 38.2%.

The mothers were also asked to state what they would like to be improved in the facilities. The responses are as tabulated in table 4.27 below.

Table 4.27: Areas the respondents want improved.

TO BE IMPROVED	FREQ.	% of responses	% of respondents
Drug availability	234	29.1	69.6
Staff attitude	21	2.6	6.3
Waiting time	11	1.3	3.3
Hours of service	34	4.2	10.1
Cleanliness	15	1.9	4.5
Reduce cost of service	40	5.0	11.9
Lab. Seivces	156	19.4	46.4
Maintenance	36	4.5	10.7
Improve care	13	1.6	3.9
Introduce delivery services	21	2.6	6.3
Expansion of facility	63	7.8	18.8
More staff	79	9.8	23.5
Post qualified staff and specialists	22	2.7	6.5
Post resident nurse/doctor	12	1.5	3.6
Provision of equipment especially baby scale	13	1.6	3.9
Increase clinic days	9	1.1	2.7
Other	24	3.0	7.1
TOTAL	803	100	

As can be seen above, the majority would like to see more drugs availed in the facilities. A good number of the respondents would also like laboratory services improved or introduced in the facilities. These two areas have been a consistent finding from the earlier sections of by-pass and ever-use, and therefore seem to be very influential in determining the choice of a health provider. It should be noted that only 3 facilities operating as Health centres have laboratory services. It was also observed that all the staff manning the laboratories had questionable qualifications, mainly from polytechnics. Subordinate staff were also found doing tests in one facility.

Only 3.9% of the respondents wanted the level of care improved. This contrasts with the earlier findings where it was the most important factor influencing by-pass and ever-use of Municipal facilities. The concept of care seems to have been ambiguous

Again, 23.5% wanted the number of staff increased while 18.8% wanted the facilities expanded, especially building/wards. Probably these could be grouped with improving care, but probing could have shed more light.

4.1.5.6. Quality Index.

From the ratings of the individual attributes, a Quality-index was developed where the responses were assigned a score of 0 if it is in the negative, 1 if it is intermediate, and 2 if it is in the positive.

The maximum score possible was 17. The mean quality index for all facilities was 7.75.

The mean quality index as per the facility catchment area is shown in table 4.28 below.

Table 4.28: Mean quality index as per facility catchment.

FACILITY CATCHMENT	SAMPLE SIZE	MEAN QUALITY INDEX	STD. DEVIATION	COEFFICIENT OF VARIATION
URBAN				
Lumumba	43	7.07	5.92	83.7
Bandani	48	6.71	6.13	91.4
Nyalenda	46	6.76	6.24	92.3
Mosque	40	4.68	5.29	113.0
Migosi	45	4.69	5.95	122.6
TOTAL	222	6.04	6.0	99.3
RURAL				
Ober Kamoth	45	10.69	3.48	32.6
Gita	45	9.33	4.54	48.7
Got Nyabondo	42	8.24	5.31	64.4
Ojola	42	9.12	4.55	49.9
Lela	45	9.36	5.73	61.2
Chiga	41	8.49	3.84	45.2
TOTAL	260	9.21	4.66	50.6
GRAND TOTAL	482	7.75	5.54	71.5

Again, respondents from the more rural facility catchment areas gave a higher quality index than their urban counter-parts. This was also seen in the utilisation patterns where the more rural populace

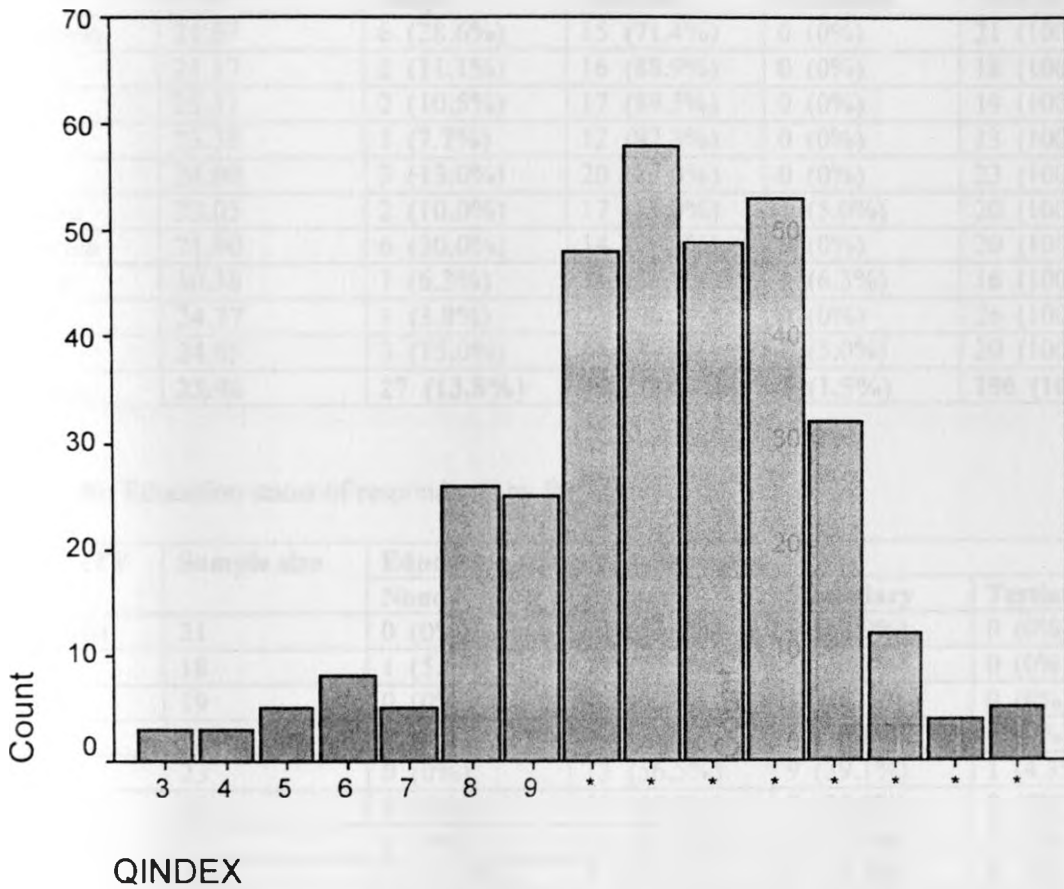
had a lower by-pass rate than the urban ones. The rural folk have very few options to choose from, as well as finding it expensive in terms of transport costs to seek care in the MOH or Private facilities in town. Their perception seems therefore to be skewed favourably towards their nearest facilities. It could also mean that low socio-economic status correlates with satisfaction with lower quality services. This needs further research, as these data were not conclusive.

Got Nyabondo had a rather high quality index, consistent with the trend in the rural catchment areas, but inconsistent with a by-pass rate of 70.7%. It may mean that there was a parameters that had an over-riding influence on the attendance, may be availability of health workers or working hours. Unfortunately, there were no clients for exit interviews, which could have shed more light.

Correlation of variation from the catchment areas showed that there is much more variation of rating where the mean score is low like Migosi and Mosque. This shows a wide difference in opinion concerning the quality parameters under investigation. On the other hand, there was less variation in perception of quality in the areas where the mean scores were high like Ober Kamoth, Gita, Ojola etc.

The mean quality index showed a near normal distribution as shown in the figure 4.1 below.

Figure 4.1: Distribution of mean quality index.



It was therefore reasonable to use the means of the quality index as shown above.

4.2.EXIT INTERVIEWS:

4.2.1.SOCIO-DEMOGRAPHIC CHARACTERISTICS:

A total of 196 people were interviewed in the Municipal facilities after receiving various MCH services. None was interviewed in Got Nyabondo as the day the team went there, there was not a single client. They also hold immunisations only once a month.

The socio-demographic characteristics of the respondents are shown below in table 4.31 and table 4.29 below.

Table 4.29: Mean age and Marital status of respondents by facility.

FACILITY	Mean age of respondent	Marital status of respondent			
		Single	Married	Widowed	TOTAL
Lumumba	21.67	6 (28.6%)	15 (71.4%)	0 (0%)	21 (100%)
Ober K.	21.17	2 (11.1%)	16 (88.9%)	0 (0%)	18 (100%)
Migosi	25.11	2 (10.5%)	17 (89.5%)	0 (0%)	19 (100%)
Gita	23.38	1 (7.7%)	12 (92.3%)	0 (0%)	13 (100%)
Lela	24.00	3 (13.0%)	20 (87.0%)	0 (0%)	23 (100%)
Bandani	23.05	2 (10.0%)	17 (85.0%)	1 (5.0%)	20 (100%)
Nyalenda	21.90	6 (30.0%)	14 (70.0%)	0 (0%)	20 (100%)
Mosque	30.38	1 (6.3%)	14 (87.5%)	1 (6.3%)	16 (100%)
Chiga	24.77	1 (3.8%)	25 (96.2%)	0 (0%)	26 (100%)
Ojola	24.95	3 (15.0%)	16 (80.0%)	1 (5.0%)	20 (100%)
TOTAL	23.96	27 (13.8%)	166 (84.7%)	3 (1.5%)	196 (100%)

Table 4.30: Education status of respondents by facility.

FACILITY	Sample size	Education status of respondent			
		None	Primary	Secondary	Tertiary
Lumumba	21	0 (0%)	12 (57.1%)	9 (42.9%)	0 (0%)
Ober K.	18	1 (5.6%)	14 (77.8%)	3 (16.7%)	0 (0%)
Migosi	19	0 (0%)	7 (36.8%)	12 (63.2%)	0 (0%)
Gita	13	0 (0%)	9 (69.2%)	4 (30.8%)	0 (0%)
Lela	23	0 (0%)	13 (56.5%)	9 (39.1%)	1 (4.3%)
Bandani	20	0 (0%)	13 (65.0%)	7 (35.0%)	0 (0%)
Nyalenda	20	0 (0%)	13 (65.0%)	7 (35.0%)	0 (0%)
Mosque	16	2 (12.5%)	9 (56.3%)	5 (31.3%)	0 (0%)
Chiga	26	1 (3.8%)	19 (73.1%)	6 (23.1%)	0 (0%)
Ojola	20	0 (0%)	14 (70.0%)	6 (30.0%)	0 (0%)
TOTAL	196	4 (2%)	123 (62.8%)	68 (34.7%)	1 (0.5%)

The mean age of those interviewed was 23.96 (SD 5.45). At least 166 (84.7%) were married while 27 (13.8%) were single, the remaining 3 (1.5%) were widowed. There is however no significant variation between the mothers interviewed in the different facilities.

At least 63% of the respondents had some primary level of education while about 35% had secondary education. Again, Migosi clients seem to be more educated than the rest.

4.2.2.REASONS FOR VISIT:

The reason for their hospital visit on these particular occasions was as in table 4.31 below.

Table 4.31: Reason for hospital visit

REASON	FREQUENCY	%
Routine ANC	23	11.7
Immunisation	123	65.8
Mothers treatment	2	1.0
Child's treatment	42	21.4
TOTAL	196	100

4.2.3.PHYSICAL EXAMINATION:

The following routine examinations were carried out on the mothers and children respectively.

Table 4.32:Examinations carried out on ANC mothers.

EXAM	YES	%	NO	%
Weight	16	72.7	6	27.3
B.P	6	27.3	16	72.7
Oedema	8	36.4	14	63.6
Anaemia	17	77.3	5	22.7
Height	3	15	17	85

Table 4.33: Examinations carried out on Children.

EXAM	YES	%	NO	%
Temperature	6	3.5	167	96.5
Weight	134	77.5	39	22.5
Anaemia	21	12.1	152	87.9

The above results show a general inadequacy in the physical examination of clients. Although weight was taken in the majority of cases, it is discouraging to note that blood pressure and presence of oedema, which are important in monitoring pregnancy, were not checked. The same applies to the children who were not screened for anaemia and fever.

4.2.4. PERCEPTION OF QUALITY OF CARE:

4.2.4.1: RESPONDENTS SATISFACTION.

Results of the respondents reports on the quality of care indicators concerning mainly on client-provider interaction are shown in table 4.34 below. The responses are grouped into those showing satisfaction or not of the particular indicators

Table 4.34: Respondents satisfaction with quality parameters.

SATISFIED				
INDICATOR	YES	%	NO	%
Physical examination	121	65.8	63	34.2
Explanation of examination	24	12.4	169	87.6
Competence of provider	156	80.4	38	19.6
Understanding of problem by provider	53	96.4	2	3.6
Discuss problem with client/patient	33	60	22	40
Freedom to ask questions	146	75.3	48	24.7
Satisfactory answers to questions	84	89.4	10	10.6
Privacy	85	44.3	107	55.7
Friendly interaction	188	96.9	6	3.1
Waiting time	141	73.4	51	26.6
Given appointment	167	89.8	19	10.2
Satisfaction with services	165	85.5	28	14.5

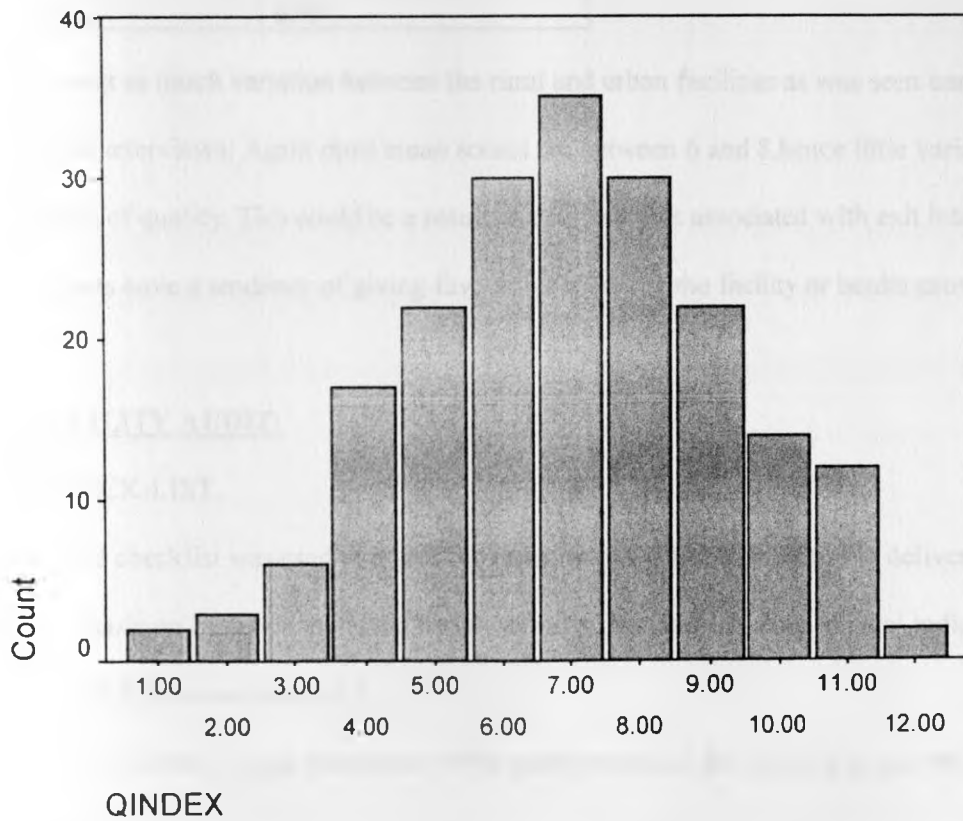
The results show a general satisfaction with most of the indicators except explanation of physical examination and privacy. Lack of privacy can affect the provider's ability to talk freely with the client and vice versa, and hence should be improved. It is also important to note that 34% of the clients were not satisfied with physical examination. This is rather high as most of the examinations done in MCH services are of routine nature.

The mean waiting time as reported by the respondents was 38.96 (SD 45.19), minutes with a range of 2-80 minutes, while the observed waiting time was 41.70 minutes (SD 34.81) with a range of 5-204 minutes. This is reasonable, as supported by the respondent's satisfaction above.

4.2.4.2: QUALITY INDEX.

A Quality index was developed for the quality indicators in the above table where 1 mark was given for a positive response and 0 for negative. The maximum possible score was 12. The mean score was 6.9541 (SD 2.3183). The means of the quality index showed a normal distribution as shown in figure 4.2 below.

Figure 4.2: Distribution of mean quality index



The mean quality index by facility are as tabulated below.

Table 4.35: Mean quality index by facility.

FACILITY	Mean Quality index
Lumumba	6.6
Ober K.	5.1
Migosi	8.3
Gita	6.4
Lela	6.3
Bandani	6.6
Nyalenda	7.4
Mosque	7.0
Chiga	7.5
Ojola	8.1
TOTAL	6.95

There is not as much variation between the rural and urban facilities as was seen earlier in the household interviews. Again most mean scores are between 6 and 8, hence little variation in perception of quality. This could be a result of courtesy bias associated with exit interviews, where respondents have a tendency of giving favourable views of the facility or health provider.

4.3. FACILITY AUDIT:

4.3.1. CHECK-LIST.

A prepared checklist was used to assess the capacity of the health facilities to deliver quality services with emphasis on Maternal and child health services. Each variable had several indicators with scores from 0 to a maximum of 2.

The tables in annex 5 show summaries of the performance of the facilities as per the indicators in the checklist.

Drug availability was the most wanting, almost all facilities lacking basic drugs like analgesics, anti-malarial and haematinics. The variation in drug availability was also noted and shows there are no equitable distribution of the drugs from the pharmacy department that is responsible for drug procurement and distribution. Facilities get drugs according to category, hence all dispensaries get the same amount of drugs despite the difference in work load. The supplies are also irregular most of

the time due to lack of funds. Some facilities have resorted to starting a revolving fund to purchase some essentials, a practice which is however illegal, and can also lead to corruption.

Equipment is another area of concern. Though 5 out of 11 scored more than 50%, a close scrutiny reveal that only 2 facilities had a functioning BP machine, while only one had a stethoscope, yet these are very important instruments in ANC clinics. At least 2 facilities had no thermometer and could therefore not diagnose fever with certainty.

Also worrying was the finding that 9 facilities had no needle holder while 7 had no scissors, basic equipment's used in minor procedures like stitching. Further interviews revealed that all the facilities apart from Lumumba could not stitch or dress a wound, yet these are common conditions especially in the rural areas.

Management issue was another area of concern. Regular meetings and supervisory visits from higher-level authorities provide facilities with incentives to maintain high quality service. Though most facilities hold regular staff meetings, sectional heads meetings at the MMOHs office are irregular. The Municipal Matron is the only officer noted to be conducting regular supervisory visits to the facilities, while the Municipal MOH is rare in the facilities. This, coupled with irregularity of meetings demotivates the already demoralised staff, and also affects quality of service. It seems the PMOs office and the DMOH are not playing their supervisory role with regards to local authorities. Most of the staff interviewed said they don't even know how they look like, while some have seen the PMO only in newspapers or TV.

All the facilities had adequate stocks of vaccines except BCG, which was lacking from the District stores. It should be noted that vaccines are supplied by the Ministry of Health through KEPI and so far their work is commendable. But at least two facilities did not have cold chain equipment, mainly fridge. Migosi collect their vaccines from Lumumba on the days of immunisations while Got Nyabondo keep their vaccines at Gita which is over 5km away and therefore carry out immunisations

only once a month. Transporting these vaccines also make their potency questionable at the time of their use.

Most facilities were noted to need some repair and maintenance as they are in pathetic conditions, especially Got Nyabondo, Ojola, Chiga and Migosi. Though most facilities had no source of water in their compounds and were buying water from hawkers, the level of cleanliness was however encouraging. This could be due to the high number of subordinate staff employed in the facilities. Most of the time they are actually idle.

The scores were added and a percentage calculated for each variable. Table 4.36 below shows the percentage scores for the different variable categories per facility.

Table 4.36: Facility % scores by quality indicator.

FACILITY	Drugs	Vacc.	Equip	Gene. atm.	Infras truct.	Infec. contr.	Mgt	Other supp.	Average %
Lumumba	27	100	91	50	100	100	33	100	75
Ober K.	50	80	64	50	80	60	50	63	62
Migosi	36	80	32	63	30	30	58	13	43
Gita	50	80	73	63	60	60	50	75	64
Lela	45	80	36	75	50	60	33	63	55
Bandani	27	80	64	63	60	50	25	50	52
Nyalenda	45	80	55	63	100	70	50	75	67
G.nyabondo	23	80	27	37	30	60	17	63	42
Mosque	32	100	36	37	60	60	50	50	53
Chiga	23	80	23	37	40	60	33	50	43
Ojola	27	80	36	50	80	60	42	50	53

From the above table it can be noted that 3 facilities scored average of below 50%, while only Lumumba scored more than 70%. A majority of the facilities are thus on borderline capacity.

The overall performance of the facilities as per the indicators is summarised in table 4.37 below.

Table 4.37: Overall performance of facilities by indicator:

INDICATOR	No. of facilities > 50% scoring	No. of facilities scoring < 50%	TOTAL
Drugs	2	9	11
Vaccines	11	0	11
Equipment	5	6	11
Gen. Atmosphere	8	3	11
Infrastructure	8	3	11
Infection control	10	1	11
Management	5	6	11
Other supplies	10	1	11

The worst scored indicators were thus drugs, equipment, and management issues as already discussed above. Indicators with the best scores were availability of vaccines, infection control facilities and other supplies

The variable categories were then weighted out of 100% in order of importance in provision of services, according to the investigator's judgement. The weights were awarded as follows.

1.	Drugs and vaccines	25
2.	Equipment	20
3.	General atmosphere	15
4.	Infrastructure	12
5.	Infection control facilities	10
6.	Management	10
7.	Other supplies	8
	TOTAL	100

The weighted scores for each facility is as in table 4.38 below.

Table 4.38: Weighted scores for quality indicators by facility.

FACILITY	Drugs/vac cines	Equipt	Gen.atm	Infrast.	Infec. Control	Mgt	Other supp.	TOTAL
Lumumba	12.5	18.2	7.5	12.0	10.0	3.3	8.0	71.5
Ober K.	14.8	12.8	7.5	9.6	6.0	5.0	5.0	55.7
Migosi	12.5	6.4	9.5	3.6	3.0	5.8	1.0	41.8
Gita	14.8	14.6	9.5	7.5	6.0	5.0	6.0	57.4
Lela	14.1	7.2	11.3	6.0	6.0	3.3	5.0	52.9
Bandani	10.9	12.8	9.5	7.5	5.0	2.5	4.0	51.7
Nyalenda	14.1	11.0	9.5	12.0	7.0	5.0	6.0	64.6
G.nyabondo	10.2	5.4	5.6	3.6	6.0	1.7	5.0	37.5
Mosque	13.3	7.2	5.6	7.2	6.0	5.0	4.0	48.3
Chiga	10.2	4.6	5.6	4.8	6.0	3.3	4.0	38.5
Ojola	10.9	7.2	7.5	6.0	6.0	4.2	4.0	45.8

After weighting, four facilities had total scores of less than 50%, and still only Lumumba scoring over 70%. Hence the majority still remains in the borderline category. Weighting therefore does not bring significant change in the overall facility score.

4.3.2.STAFFING AND WORKLOAD.

Also determined was the number of different cadres of staff in each facility and number of people attended for the last one year (July 2001-July 2002) in the different departments .The results are as shown in table 4.39 below.

Table 4.39: Staffing pattern and workload.

FACILITY	NO. OF STAFF							NO. OF CLIENTS IN ONE YEAR, July 2001-June 2002			
	Dr s	COs	RNs	ECN	Lab. tech	Pharm tech	SS	ANC	CWC	FP	OPD
Lumumba	0	2	3	12	3	1	23	1610	6068	3617	16,514
Ober Kamoth	0	0	0	4	2	0	14	451	1674	502	4608
Migosi	0	0	0	4	0	0	6	5*	112*	53*	1281*
Gita	0	0	0	3	0	0	11	231	1408	542	1826
Lela	0	0	0	2	0	0	8	349	1763	1038	6335
Bandani	0	0	0	2	0	0	11	-	2810	258	2313
Nyalenda	0	1	1	4	2	0	15	1125	8497	4167	7074
Got Nyabondo	0	0	0	2	0	0	5	72	327	157	1627
Mosque	0	0	0	3	0	0	7	220	3776	850	2484
Chiga	0	0	0	2	0	0	10	320	3139	421	2730
Ojola	0	0	0	0	0	0	9	264	1970	-	4745
TOTAL	0	3	4	40	7	1		4647	31544	11605	47397

Note: * - no. of clients seen in 6 months, since Migosi was re-opened in February 2002.

The staffing pattern showed that there is shortage of clinical officers. Some of the facilities have several vacancies for clinical officers in their establishment but these have not been filled for a long time. This could compromise the quality of clinical care.

It was also noted that the difference in cadres of the nursing staff was not recognised both in remuneration and allocation of duty. Duration of service in the council was more important.

The Ministry of health recommends that a community nurse should handle 20 clients in a day while Registered nurse should handle 50 clients a day. Since there were only four registered nurses who were in any case doing the same duties as the community nurses, a workload was computed for the nursing staff in general. The results are as in table 4.40 below.

Table 4.40: Number of professional staff against number of clients attended.

FACILITY	NO.OF CLIENTS PER YEAR	NO.OF CLIENTS PER MONTH	TOTAL NO.OF NURSING STAFF	NO.OF CLIENTS PER NURSE PER	
				MONTH	DAY
Lumumba	27,809	2,317	15	136	7
Ober K.	7,235	603	4	150	8
Migosi	1,451*	242	4	61	3
Gita	4,007	334	3	111	6
Lela	9,485	790	2	395	20
Bandani	5,381	448	2	224	11
Nyalenda	20,863	1,739	5	289	14
Got Nyabondo	2,183	182	2	91	5
Mosque	7,330	611	3	204	10
Chiga	6,610	551	2	276	14
Ojola	6,979	582	2	291	15
TOTAL	95,193	8399	44	191	10

Note: *-number of clients seen in 6 months.

It can be noted from the above table that there is serious underutilisation of the nursing staff with only Lela meeting the expected workload per staff. Migosi and Got Nyabondo have very low workload, which needs to be addressed urgently. Again the staff should be re-deployed according to the workload.

There was also over-employment of supportive staff in almost all the facilities. This could be due to political reasons as councillors and officers want to employ their relatives, but they are a burden to the cash-strapped council.

4.3.3.AVAILABILITY OF MCH SERVICES.

It was noted that most facilities were holding ANC and immunisation clinics on selected days of the week as follows.

Table 4.41: Number of ANC and Immunisation services in a week.

FACILITY	NO. OF CLINIC SESSIONS PER WEEK	
	ANC	IMMUNIZATION
Lumumba	5	5
Ober Kamoth	5	5
Migosi	1	1
Gita	1	2
Lela	1	1
Bandani	No formal clinic	2
Nyalenda	5	5
Got Nyabondo	No formal clinic	1 per month
Mosque	5	5
Chiga	2	2
Ojola	No formal clinic	2

Most of the facilities which held these clinics once or twice a week indicated that they did this because of low number of clients or lack of cold chain equipment, hence they keep their vaccine stocks in other facilities and it would be cumbersome to go for them daily. Some facilities did not have formal ANC clinics and could attend those who come for first visits then refer them to other facilities. These same facilities did not have FP clinics as well. It could not be established why this was so, or what criteria was applied to exclude these facilities from offering these services.

4.3.4. TRAINING:

In-service training in various areas for the technical staff was also established for all the facilities and is summarised in table 4.42 below.

Table 4.42: In-service training for Nurses and clinical officers.

COURSE	NURSES			CLINICAL OFFICERS		
	Trained	Untrained	%Trained	Trained	Untrained	%Trained
KEPI	13	31	29.5	3	0	100
FP/RH	13	31	29.5	1	2	33.3
STI	22	22	50.0	3	0	100
MALARIA	2	42	4.5	0	3	0
C.D.D	8	36	18.2	3	0	100
ARI	0	44	0	1	2	33.3
IMCI	0	44	0	0	3	0
HSM	0	44	0	0	3	0

Although all the nurses and clinical officers received their basic training in recognised Medical colleges (MTC and Mission colleges), there was lack of in-service training in most of the areas especially for the young nurses mainly employed in the last 10 years. Many of the in-charges also complained of favouritism when it comes to selecting people for training. It was also noted from discussions with the administrators that the Council does not have a policy on training.

4.3.5. ADMINISTRATIVE ISSUES:

Observations were made on the opening time of the facilities, the time first patient arrives and attended, the length of lunch break and closing time. The results are tabulated below.

Table 4.43: Observed service times.

TIME	N	Minimum	Maximum	Mean	SD
Opening	10	8.00 am	9.14 am	8.22	0.36
First pt.arrives	10	8.05 am	10.45 am	9.35	0.79
First pt. attended	10	8.45 am	11.00 am	8.56	0.82
Lunch break	10	60 min.	90 min.	81.0	12.87
Closing	10	4.00 p.m.	5.00 p.m.	4.36	0.37

These are the acceptable official working hours. This was of course supported by the finding from household interview that majority were satisfied with the operation time during the day.

Also observed was that the facilities never had tea breaks.

These were however one day observations due to logistical inadequacies. More prolonged observations could be recommended to get a more reliable picture.

4.4. CORRELATIONS:

Table 4.44 below shows the various variables used in the study and which were used to test the hypotheses and answer the research questions. The distances between the facilities and the Provincial and District hospitals were also included to give a bearing as to why many people were using the two facilities for MCH services compared to Municipal facilities.

Table 4.44: Quality variables by facility.

FACILITY	UTILISATION RATE %			FQUN %	FQW %	Qind Exit	Qind HH	Ever-use%	By-pass rate-%	Dist.PH Km.	Dist. DH Km.
	ANC	IMM	TREA								
Lumumba	34.1	42.9	36.6	72	71.5	6.6	7.1	62.8	79.1	1.4	1.1
Ober K.	91.1	88.9	57.8	60	55.7	5.1	10.7	93.3	44.4	17.3	15.1
Migosi	44	20.5	20.5	37	41.8	8.3	4.7	40.0	93.3	1.8	4.4
Gita	64.9	74.4	39.5	62	57.4	6.4	9.3	84.4	66.7	7.2	9.1
Lela	43.2	53.3	40.0	52	52.9	6.3	9.4	75.6	66.7	8.7	7.3
Bandani	15.6	29.2	36.2	48	51.7	6.6	6.7	56.3	85.4	5.0	4.2
Nyalenda	32.6	44.4	34.9	65	64.6	7.4	6.8	56.2	76.1	4.4	2.4
G.Nyabondo	37.1	51.3	52.6	37	37.5	-	8.2	73.8	70.7	12.8	15
Mosque	13.2	33.3	40.5	46	48.3	7.0	4.7	47.5	82.5	1.3	1.6
Chiza	78.0	89.7	78.0	38	38.5	7.5	8.5	92.7	29.3	7.9	9.8
Ojela	31.7	66.7	71.1	49	45.8	8.1	9.1	85.7	69.0	14.2	12.8
TOTAL	40.4	53.7	45.7	55.3	51.8	6.95	7.8	69.7	69.6		

KEY:

ANC-utilisation rate of antenatal services

IMM-utilisation rate of immunisation service.

TREA-utilisation rate of children's treatment

FQUN%-Average capacity score of facility before weighting

FQW%-total capacity score after weighting

Qind Exit-mean quality index from exit interview

Qind HH-mean quality index from household interview

Dist.PH-distance from Provincial hospital

Dist.DH-distance from District hospital

The relationship between utilisation rates, by-pass rates and ever- use of the Municipal facilities with the perceived quality of care and capacity of the facilities to provide care was determined using scatter graphs and Spearman`s rank coefficient.

1. Utilisation rate of MCH services versus perceived quality of care

The relationships between the utilisation of MCH services and the perceived quality of care was determined using both perspectives from household and exit interviews. The following scatter diagrams demonstrate these relationships.

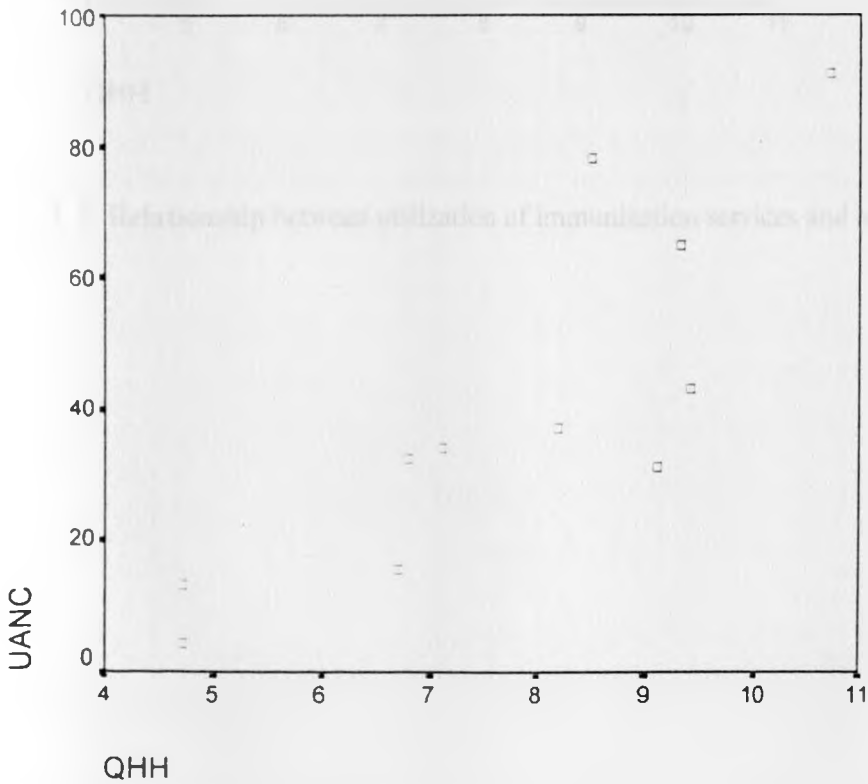


Figure 4.3 : Relationship between Utilisation of ANC and Household quality index

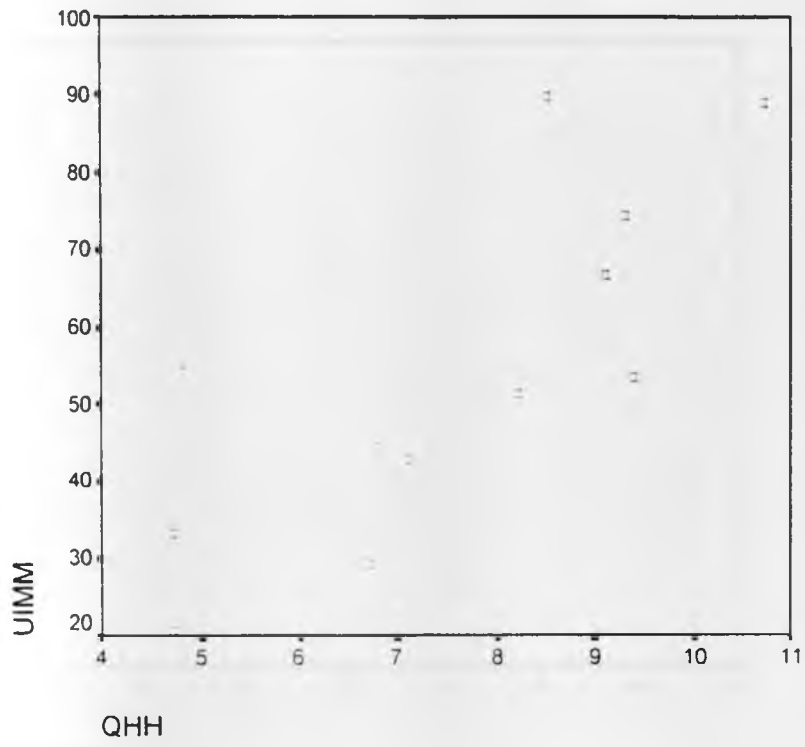


Figure 4. 4: Relationship between utilization of immunization services and household quality index

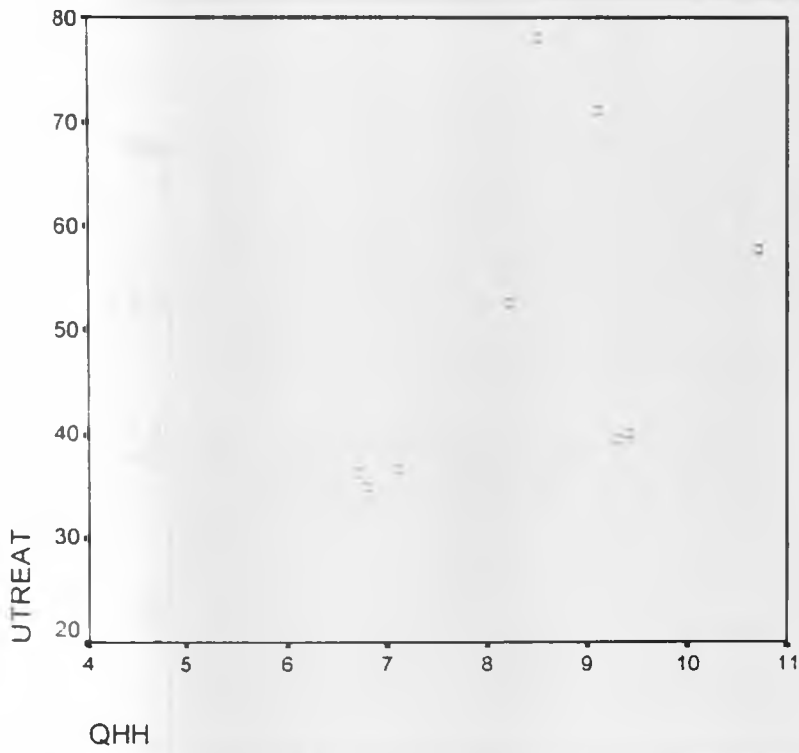


Figure 4.5: Relationship between utilization of child treatment services and household quality index

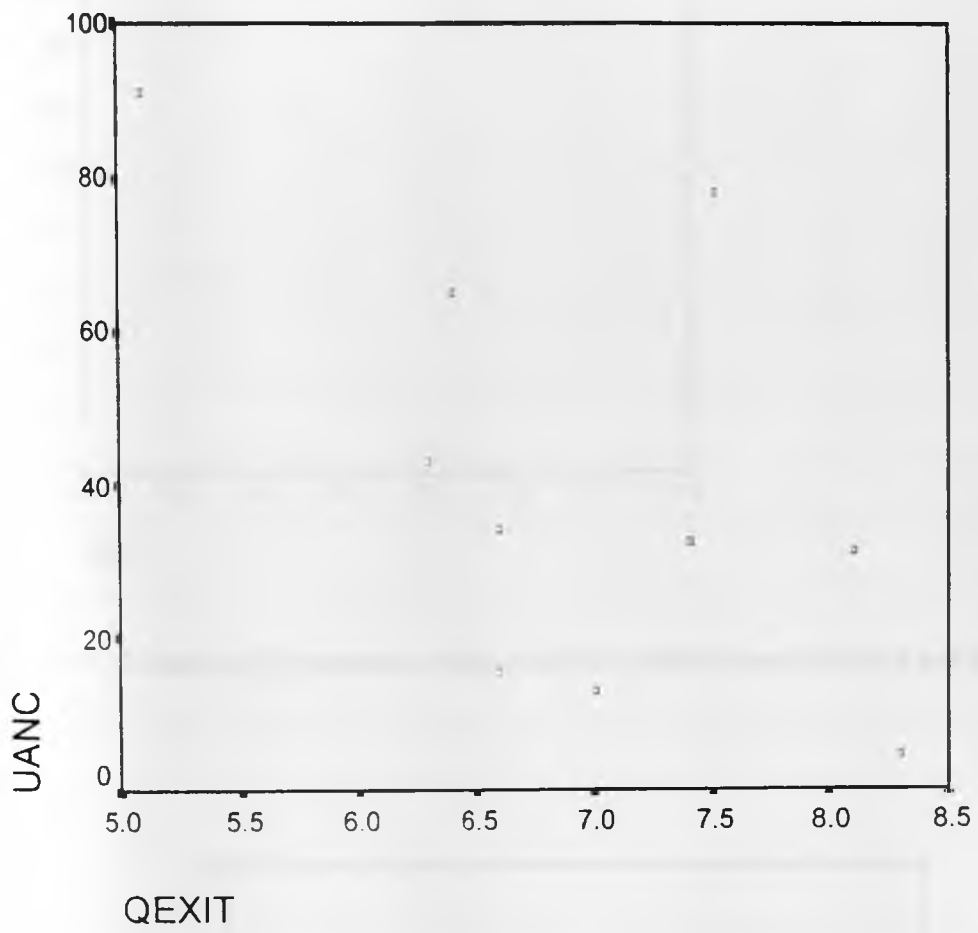


Figure 4.6: Relationship between utilization of ANC services and exit quality index.

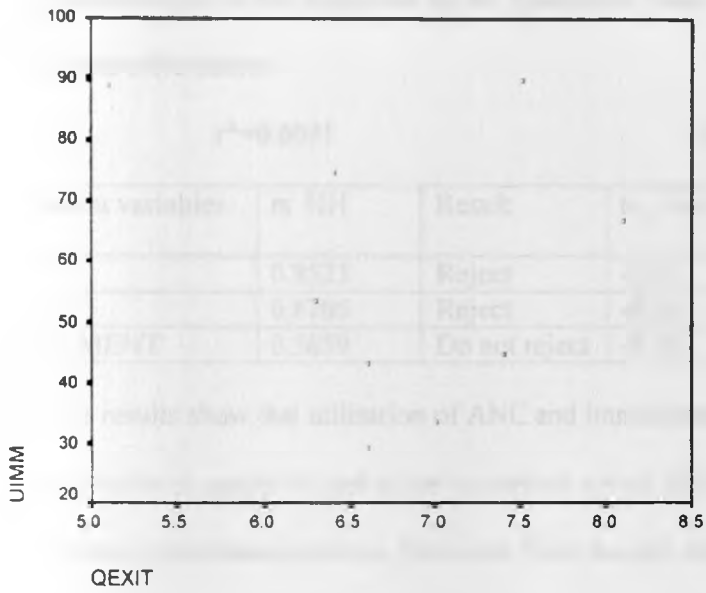


Figure 4.7: Relationship between utilization of immunization services and exit quality index.

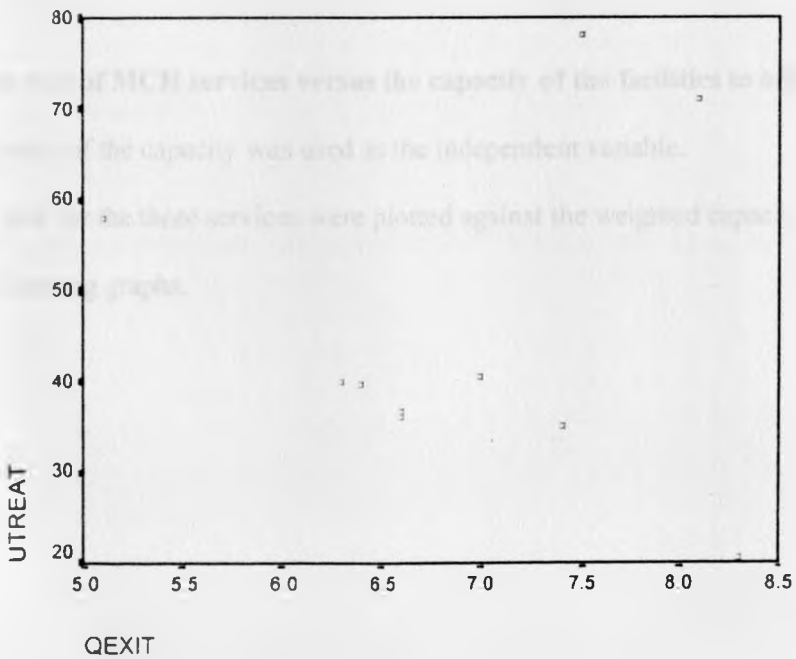


Figure 4.8: Relationship between child treatment attendance and exit quality index.

These relationships are also supported by the Spearman's Rank coefficient for hypothesis testing as shown in the table below.

$$r^* = 0.6091$$

$$r^* = - 0.6364$$

Dependent variables	rs HH	Result	rs Exit	Result
ANC	0.8523	Reject	-0.88	Do not reject
IMM.	0.8705	Reject	-0.58	Do not reject
TREATMENT	0.5659	Do not reject	-0.28	Do not reject

The above results show that utilisation of ANC and Immunisation services is significantly associated with the perceived quality of care as per household survey while the perception does not influence the utilisation of treatment services. However, from the exit interview, there is no relationship between the utilisation of the three services with the perceived quality of care. The exit interview mainly dwelt with the client-provider interaction and hence did not include all the perspectives of quality. Again there was not much variance in the quality assessment of the exit clients as shown in table 4.36.

3. Utilisation rate of MCH services versus the capacity of the facilities to offer services.

The weighted index of the capacity was used as the independent variable.

The utilisation rate for the three services were plotted against the weighted capacity indexes as shown in the following graphs.

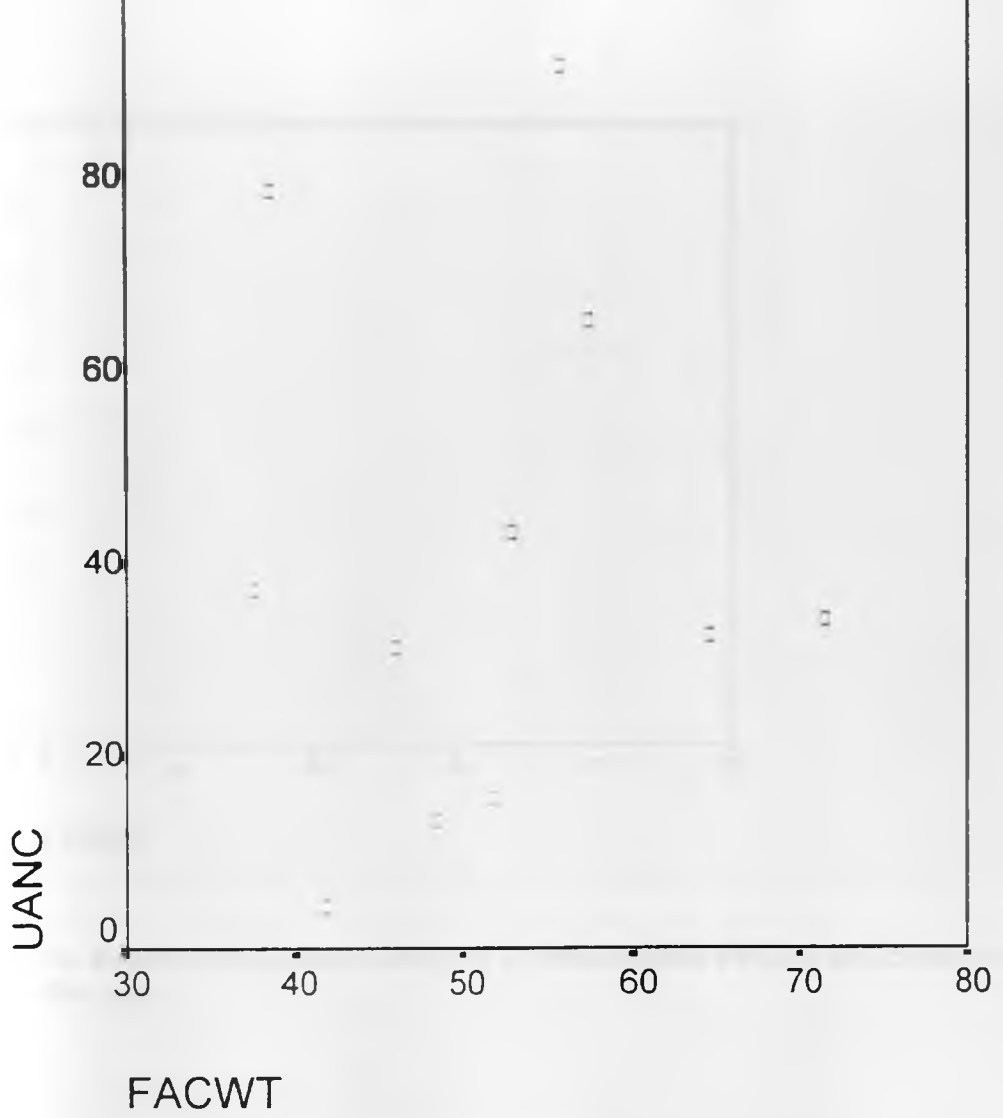


Figure 4.9 Relationship between utilization of ANC services and capacity of facility to offer care.

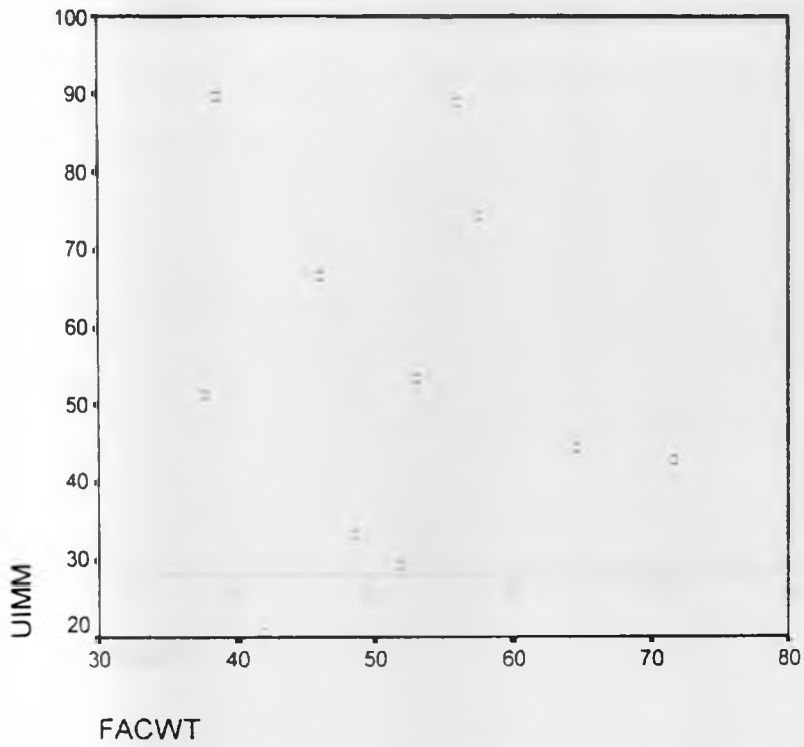


Figure 4.10: Relationship between utilization of immunization services and capacity of facility to offer care.

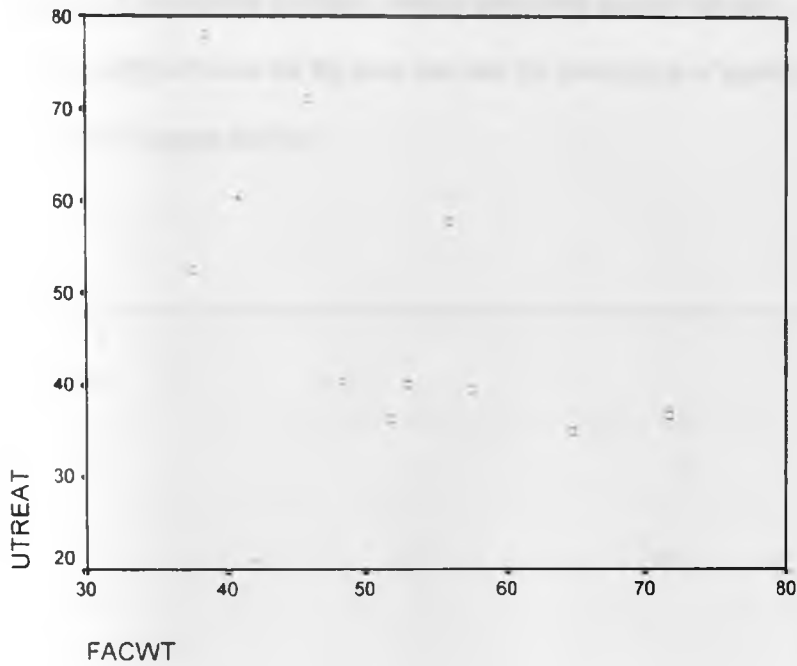


Figure 4.11: Relationship between utilization of child treatment services and facility capacity

The graphs show no clear relationship between utilisation of MCH services with the capacity of the facilities to offer services.

These findings are further reinforced by the Spearman, s Rank coefficient test for hypothesis as shown in the table below

$$R^*=0.6091$$

Dependent variables	rs	Result
ANC	0.1727	Do not reject Ho
IMM.	-0.0091	Do not reject Ho
TREATMENT	-0.4273	Do not reject Ho

The results show that utilisation of MCH services is not influenced by capacity of the facility to offer services.

3. By-pass of municipal facilities versus perceived quality of care

The relationship between the By-pass rate and the perception of quality of care can be demonstrated by the scatter diagram below.

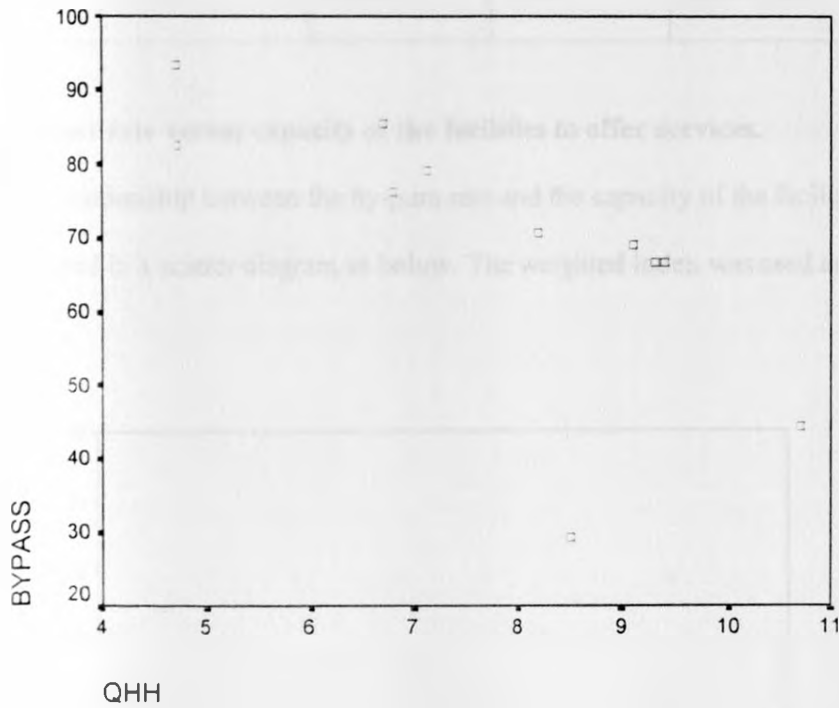


Figure 4.12: Relationship between by-pass and perception of quality from household survey.

As the quality indexes increase the by-pass rate goes down, hence it can be seen that there is a negative association between by-pass and perceived quality of care. As quality increase, by-pass goes down. Chiga appears here to be an outlier. This could be because it is isolated in the rural area with very poor communication to town. There are actually no public transport plying the area, hence the residents have no otherwise but to use the nearest facility, hence the lower than expected by-pass.

Performing Spearman, s Rank coefficient test for hypothesis testing, the hypothesis was rejected as shown below.

Quality index from household was used as the independent variable

Dependent variable	-r*	rs	Result
By-pass	-0.6091	-0.85	Reject Ho.

4. By-pass rate versus capacity of the facilities to offer services.

The relationship between the by-pass rate and the capacity of the facility to offer care is represented in a scatter diagram as below. The weighted index was used as the independent variable.

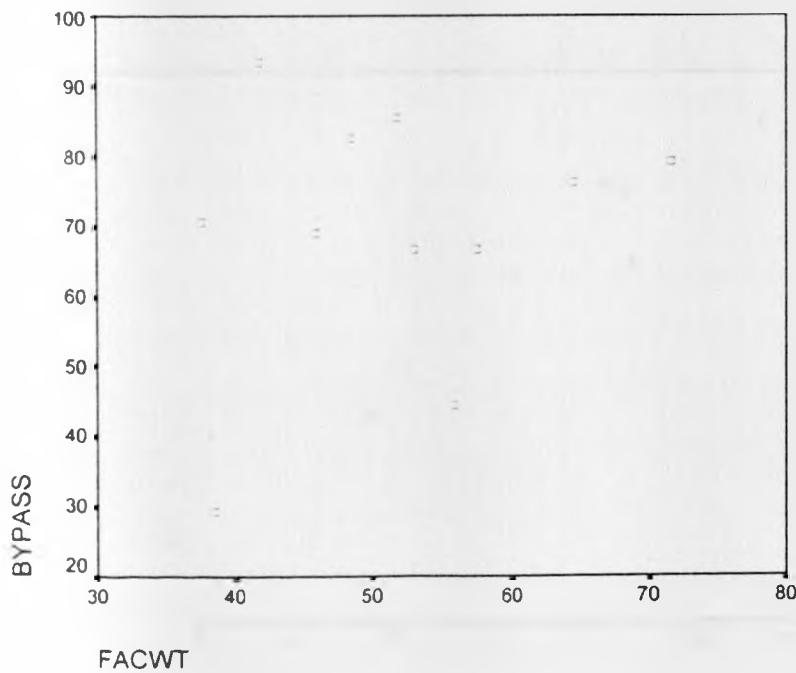


Figure 4.13: Relationship between by-pass and capacity of facilities to offer care

From the diagram it can be seen that there is no relationship between the by-pass of a facility and the capacity of the facility to offer services This is proved by the Spearman, s Rank coefficient test for hypothesis testing as shown below.

Dependent variable	-r*	rs	Result
By-pass	-0.6091	-0.0568	Do not reject

5. Ever-use of municipal health facilities versus perception of quality of care

Quality index from household survey was used as independent variable.

The scatter diagrams below represent the relationship between the ever-use of Municipal facilities and the perceived quality of care.

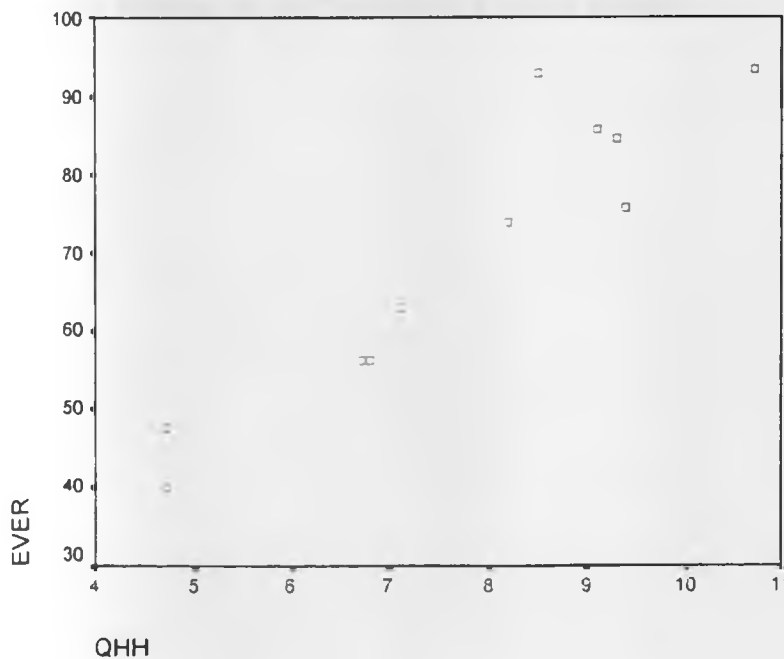


Figure 4.14: Relationship between ever-use of Municipal facilities and perception of quality from household survey.

As the quality index increase, there is a likelihood of ever-use of the municipal facilities, hence a positive relationship.

This is further supported by Spearman, s Rank coefficient test for hypothesis testing as shown below.

Dependent variable	R*	rs	Result
Ever-use	0.6091	0.9205	Reject Ho

Hence ever-use of municipal health facilities is influenced by the perception of quality of care.

6. From the utilisation and by-pass analysis, it was noted that most of those who by-passed Municipal facilities either went to Provincial or District hospitals for services. The distances from the Municipal facilities to the two MOH facilities are presented in table 4.44 above. The following scatter diagrams show the relationship between by-pass of Municipal facilities and the distances between the facilities and the Provincial and District hospitals.



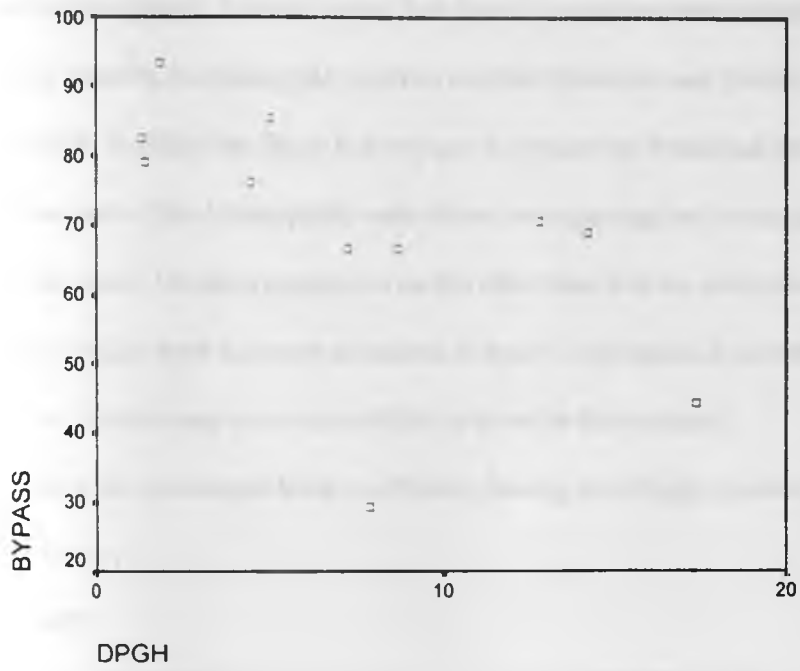


Figure 4.15: Relationship between by-pass and distance between facility and PGH.

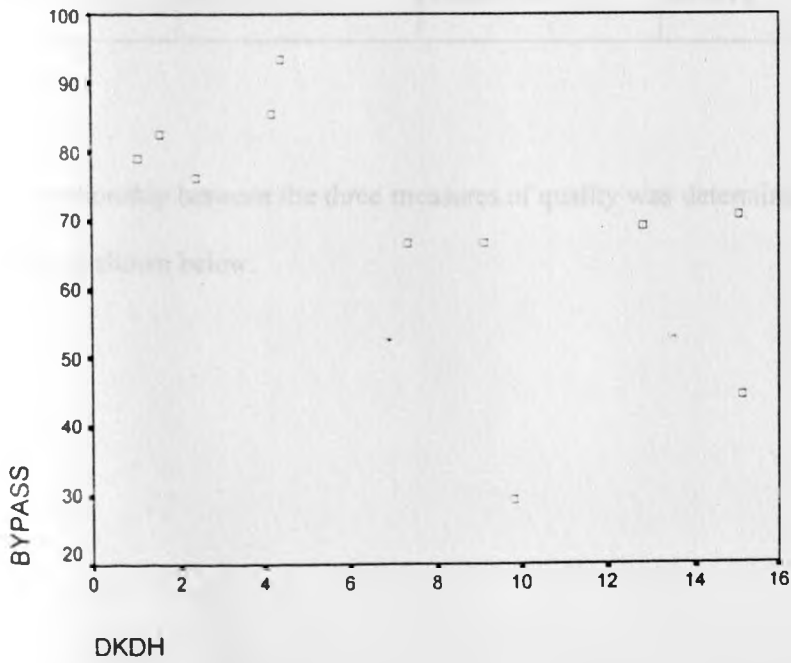


Figure 4.16: Relationship between by-pass and distance between facility and KDH

From the two graphs, it can be noted that there is a negative relationship between by-pass and distance between the Municipal facilities and the Provincial and District hospitals. The nearer one is to the MOH facilities the likely it is for one to by-pass the Municipal facility. The people living in the urban part of the Municipality were therefore bypassing the Municipal facilities more for the MOH facilities. The rural population on the other hand had no alternative but to use the Municipal facilities, which were the most accessible to them. Chiga again is an outlier, not following the trend due to its isolation and poor accessibility to town by the residents.

Performing the Spearman's Rank coefficient, leaving out Chiga, the relationship is supported as shown below.

$$R^* = 0.6091$$

Dependent	DPGH		DKDH	
	rs	Result	Rs	Result
By-pass	0.7924	Reject Ho	0.6772	Reject Ho

7. The relationship between the three measures of quality was determined by means of scatter diagrams as shown below.

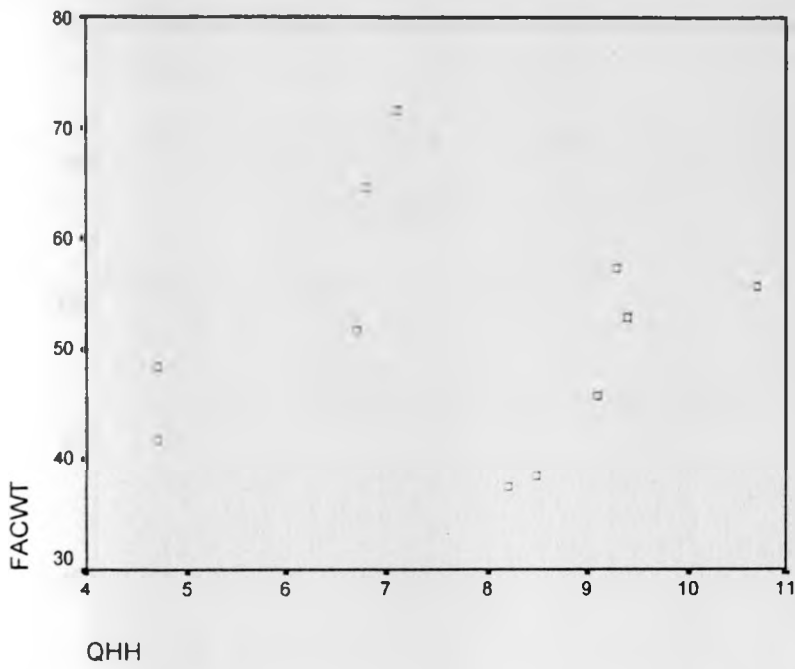


Figure 4.17: Relationship between facility capacity to offer care and perceived quality of care from household survey.

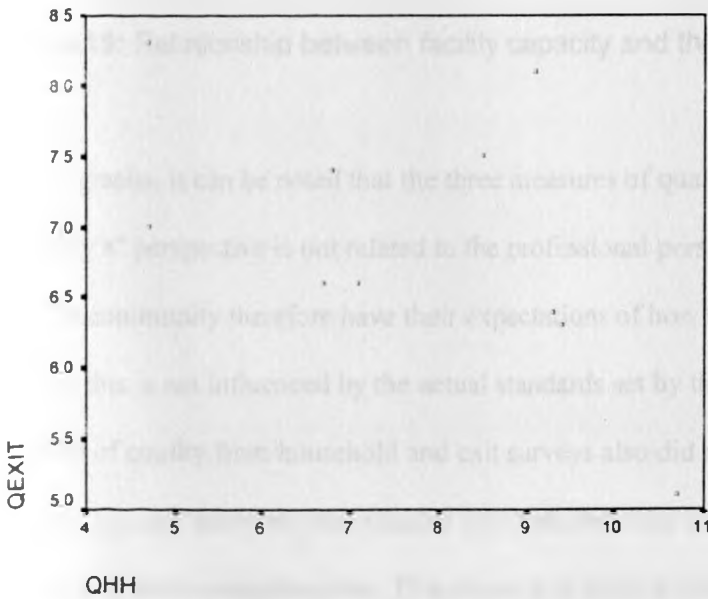


Figure 18: Relationship between exit quality index and household quality index.

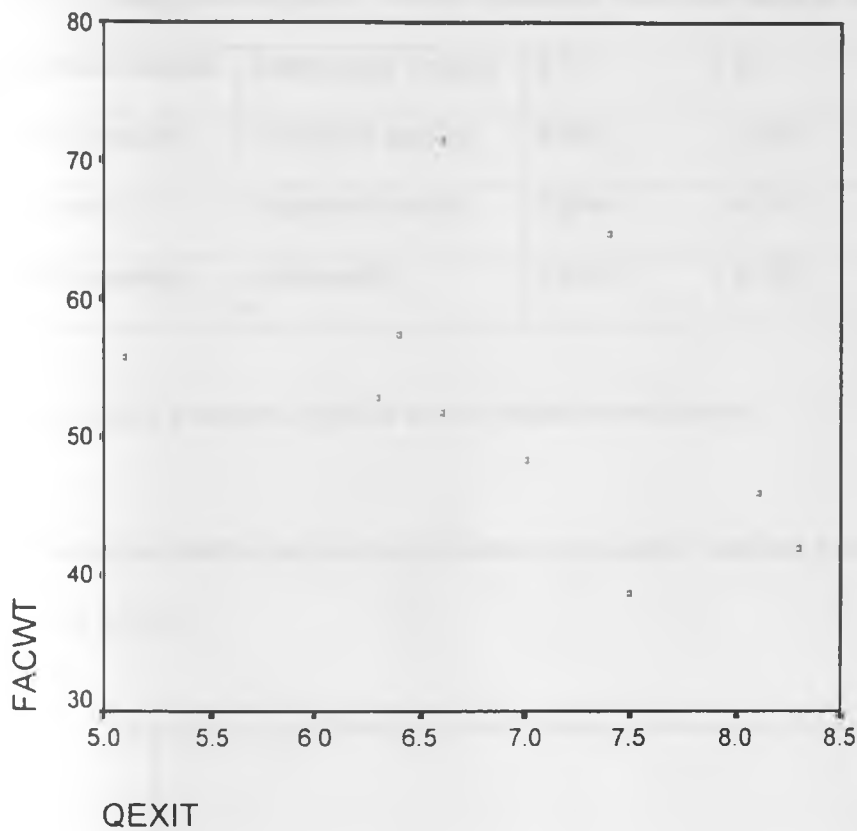


Figure 4.19: Relationship between facility capacity and the exit quality index.

From the graphs, it can be noted that the three measures of quality of care are not related. The community's perspective is not related to the professional perspective measured by the facility audit. The community therefore have their expectations of how the facilities should operate or handle them, and this is not influenced by the actual standards set by the professionals.

Perception of quality from household and exit surveys also did not show any relationship. This could be because the exit interview only tackled the client-provider interaction while the household interview was more comprehensive. This shows that client-provider interaction is not enough to determine how one perceives the quality so as to determine where he seeks health care, as shown earlier.

The above findings are supported with the spearman's Rank coefficient as tabulated below.

Dependent variable	Independent variable	R*	RS	Result
Facility capacity	Household quality	0.6091	0.1841	Do not reject
Exit quality	Household quality	0.6364	0.5182	Do not reject
Facility capacity	Exit quality	0.6364	0.5697	Do not reject

Hence the three measures of quality are not related to one another

8.To determine whether the workload influence the quality of care and by-pass, scatter graphs are presented below.

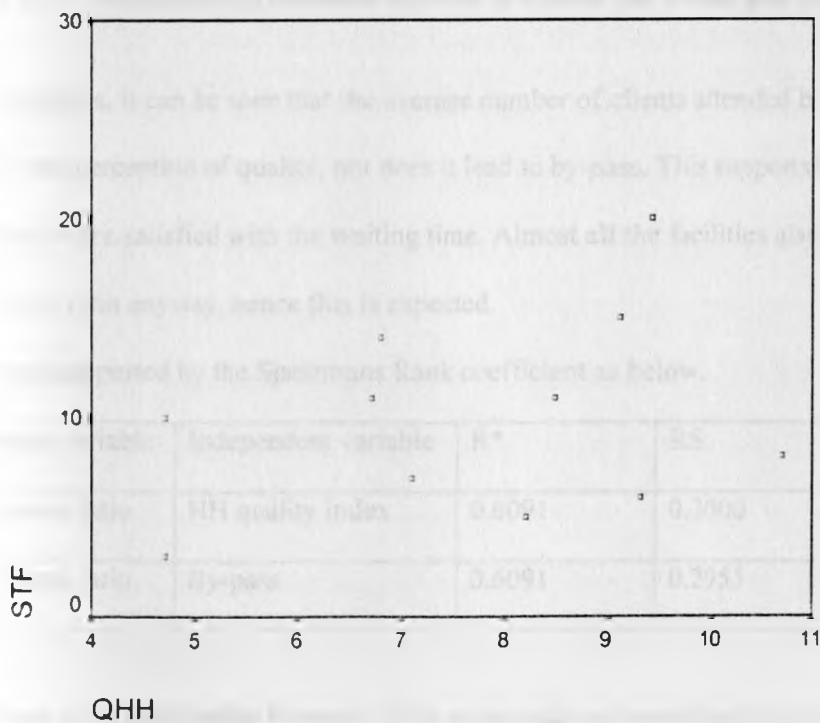


Figure 4.20 : Relationship between client-nurse ratio and perceived quality of care from household

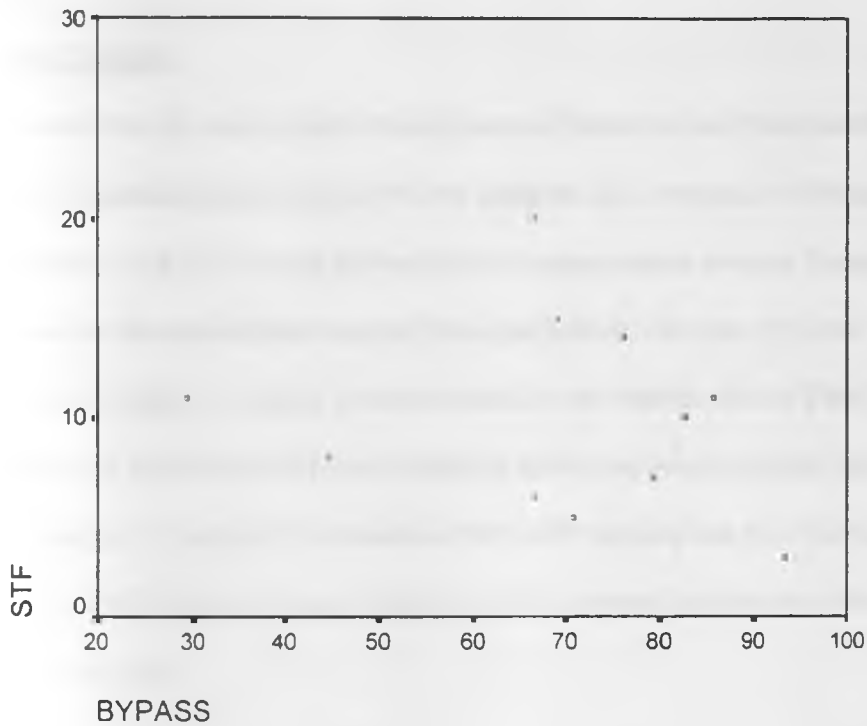


Figure 4.21 : Relationship between number of clients per nurse and the by-pass rate.

From the graphs, it can be seen that the average number of clients attended by a nurse does not influence the perception of quality, nor does it lead to by-pass. This supports the finding that most of the mothers were satisfied with the waiting time. Almost all the facilities also had a very low client-nurse ratio anyway, hence this is expected.

This is also supported by the Spearman's Rank coefficient as below.

Dependent variable	Independent variable	R*	RS	Result
Client-nurse ratio	HH quality index	0.6091	0.3000	Do not reject
Client-nurse ratio	By-pass	0.6091	0.2955	Do not reject

Hence there is no relationship between client-nurse ratio and perceived quality of care and by-pass of the Municipal facilities. This could be because most facilities are under-utilised as shown in table 4.40.

5: DISCUSSION:

The results from the survey show that utilisation of Maternal and Child health at the Municipal facilities is generally low, with only 40.4% using the ANC services, 45.7% using clinical services for sick children, and 53.7% using the facilities for immunisation services. Except for immunisation services, the Kisumu residents use the Municipal facilities less than the other facilities combined. The above findings are similar to those reported in the Strategic Health Plan for Nairobi area (1992), that although majority of the Nairobi residents (60%) use the city council facilities more than any other category of facility, the utilisation of MCH/FP services was low. The Nairobi Area Study (REACH, 1988) also found under-utilisation of the physical facilities as a critical area of weakness in the health system.

There was a by-pass of about 70% overall, meaning 70% of the respondents had by-passed Municipal facility for at least one of the three services. This shows lack of confidence in the Municipal facilities, given that they are a majority within the municipal boundaries. For the individual services, the by-pass rate for ANC was 59.5%, while for treatment of children it was 54.3% , and 46.3% for immunisation

Migosi had the highest by-pass rate and also lowest utilization rates of the services, while Chiga had the lowest by-pass rate and also high utilisation rates of the three services. There was a general trend of the rural areas having low by-pass rates and high utilisation rates than the urban catchment areas, a result explained mainly by the varying distances to the alternative facilities and variation in education status among urban and rural populations.

The by-pass rate and ever-attendance of Municipal facilities showed a strong relationship with education status, occupation and type of dwelling. Even after using logistic regression to factor in distance to provincial hospital and other variables, the association between by-pass and education

status is still strong. This suggests that those with better socio-economic status are more likely to bypass, or to have never used Municipal facilities. This is likely to be due to their ability to pay for services and transport costs for seeking better service.

Results of the respondents reports on the quality of care indicators as reported by the 336 mothers who had used the Municipal health facilities for MCH services at any one time during the past three years demonstrate variations in the responses reported based on the elements and the indicators studied. Majorities of the women were satisfied with the provider's general attitudes and the communication process that took place between themselves and the health care providers. This was demonstrated both in the household and exit interviews. This is consistent with other studies done elsewhere. A national level study done in Kenya (Obonyo et al, 1993) showed that 9.92% outpatients in MOH hospitals rated staff attitude as excellent while 68.6% gave a rating of good. Also, a study done in Malawi, (Lule et al,2000) found that 97.2% were satisfied with the provider's general attitude, 90.7% with communication and 69.8% with the provider's sincerity.

Of concern under the client-provider relationship was the finding that the providers did not explain to the clients what they were doing during their physical examination. This could be due to the fact that majority of the respondents for exit interview brought children for immunisation and the health workers take the exercise as routine. Also, the majority of women said there was no privacy in the service rooms. This was confirmed during the facility audits, that most of the facilities were using one room for both ANC and Immunisations, where all the weighing, examination and vaccinations were taking place. It is apparent that the health providers do not give emphasis to privacy to these services. This lack of privacy can also affect utilisation of facilities, as reported by Lule.

The results show a varied satisfaction of women on indicators of providers technical competence on handling the clients. The majority of them were satisfied with the providers understanding and competence to handle their/their children's problem. However only 46.4% were satisfied with the physical examination carried out by the providers. Also interesting was the finding that 37% of the respondents could not tell whether the provider know his/her work well or not. This group came mainly from the rural catchment areas with Ober Kamoth, Ojola and Chiga contributing 14%, 13.7% and 11.3% respectively, while the more urban facility catchment areas like Migosi and Lumumba only contributed 4.8% and 5.6% respectively. These people therefore, by virtue of their being unable to access other health facilities, either financially or physically, would care less about quality of care they receive.

Of more concern however was the finding that most of the providers were not doing some of the basic examinations like checking the mothers blood pressure, oedema and height or the children for fever or anaemia. These seem to have been left for the physicians who are dealing with the sick mothers or children. Maybe blood pressure could not be taken because the facilities had no relevant equipment, but there was no excuse in not doing the other routine examinations. This failure in examining clients was also reported in the 1999 Kenya Service Provision Assessment Survey which noted various areas of examination which were not being done routinely like taking blood pressure, checking for danger signs in children like skin turgor for dehydration, e.t.c.

This study demonstrated general satisfaction with the infrastructure including the cleanliness and quality of the building. This is supported by the facility inventory where 73% of the facilities scored favourably under general atmosphere and infrastructure.

Analysis of the results showed that perceived quality of care influences the utilisation of MCH services as well as by-pass and ever-use of the Municipal facilities. This was also shown in a

UNICEF (1995) Bamako Initiative study which found that in one district in Pakistan, the community saw no value in using local health facilities for necessary care due to the low quality of care there. Only 5% of sick children were taken to the local facilities for treatment.

The results from exit interview though, did not show any relationship with these parameters. This could be because it covered only the client-provider relationship, which is only one aspect on which the client satisfaction depends.

The results also showed that perceived quality of care does not influence the utilisation of facilities for clinical services. Hence there may be other factors like nature of the illness, the seriousness, the time etc. For example, when asked where they would go for treatment if they fell sick at the time of the interview, many mothers said that they would go to their nearest municipal facility if the sickness is mild, but would go to either Provincial or District hospital if it is serious.

Results from facility audit showed that most of the facilities had acceptable capacity to offer services, but more improvements are needed in some areas like provision of drugs and equipment, improvement of buildings and infrastructure, and management issues. Lumumba had the best score followed by Nyalenda, while Got Nyabondo and Chiga had the worst scores. There was however not much variation between the rural and urban facilities. These findings are similar to the KSPA survey of 1999, which reported that only a third of the surveyed facilities had all the general-purpose equipment items to offer basic health care, but that overall the facilities are well equipped to provide routine antenatal care and childcare. However, shortages of basic supplies and drugs limit the ability of the facilities to provide effective service. Obonyo et al (1993) in their study reported that the most important thing patients would like improved in MOH hospitals is availability of drugs. World Bank (1994), in a 'Quality of care Beneficiary Assessment Study' commissioned in Zambia reported that urban areas complained of shortage of drugs and poor staff attitudes.

In-service training helps to keep the health workers abreast of the changes in the medical world and improve their management skills. A study in Nigeria, (Kim, 1992) found that quality of care provided by family planning workers improved significantly with short-term counselling training, as did client compliance with follow-up appointments. Very few of the technical staff in the Municipal facilities have gone for the basic courses like malaria, control of diarrhoeal diseases, family planning and KEPI while non of the nurses has done IMCI training and any management course. It is hoped that with the implementation of IMCI by the Ministry of Health, the Municipal staff will also get a chance of being trained. The KSPA survey of 1999 found that 40% of the health workers had never had an in-service training course while only 40% had got any training in the past 5 years.

The Ministry of health supervision through the PMO and DMOH offices was noted to be wanting. Health service provision by the Municipalities is a delegated responsibility by the Ministry of health, who are therefore expected to retain the overall supervisory role. Keeping abreast of the functions and operations of these Municipal health facilities will make them respond appropriately to any deficiencies, like trainings, supplementing drugs and medical supplies, and other policy issues. It is ironical that the Ministry of health would supply vaccines, contraceptives and STI drugs to the Municipal facilities from the Nairobi program offices and fail to supervise the use of these supplies from the local offices. A lot of improvement is therefore needed in this area.

Analysis showed that utilisation of MCH services and by-pass of the Municipal facilities is not influenced by the capacity of the facilities to offer services. This shows that the community members may not know the finer details of what should be in the facility but the way the care is eventually given to them is what matters. Hence a facility can be very well equipped and staffed but if they do not meet the client satisfaction tool, their utilisation will still be low.

The facility audit was used to provide the professional viewpoint of the quality of care, but the results show that the community's viewpoint is stronger in determining utilisation of health services. For example, Lumumba health centre had the highest facility score of 71.5% while only 62.8% of the respondents had used it, and a by-pass rate of 79.1%. Chiga dispensary on the other hand had the lowest facility score of 38.5%, but had 92.7% of the respondents having ever used it, with a by-pass of only 29.3%. The clients also rated Chiga higher than Lumumba for exit and household quality assessments, with 7.5 and 8.5 respectively against 6.6 and 7.1 for Lumumba. Health administrators are thus caught in a situation where they have to balance both in order improve demand in the peripheral facilities and deflect the people from the referral facilities. The balancing act may be difficult unless the communities are incorporated in the management of their local facilities. This can be done through setting up of Facility Health Management Boards whose membership will be drawn from the facility catchment areas and the in-charges of the health facilities. These should be overseen by the Municipal Health Management Board with a wider membership drawn from community members, Municipality and the Ministry of Health. The boards will act as a link between the communities and the service providers.

There was a consistent correlation between the socio-economic status, or "the ability to pay" surrogates and by-pass and ever-use of Municipal facilities. Studies have however proved that quality is the most important factor in determining utilisation than cost of services. A study done in Nigeria, (Denton et al, 1991) found that improvements in quality would have a larger impact on increasing demand than lower prices. Wouters (1991) found that quality was an important decision variable for users choosing a provider and that they were willing to pay for quality improvements. From the foregoing it would seem that the Provincial and District hospitals provide better quality care than the Municipal facilities, though they also charge more for their services. But the fact that by-pass was less in the rural facilities also reflects the fact that distance plays a role in determining

where one seeks care. This was proven in this study, where those residing in the catchment areas of the facilities closer to the two MOH facilities had a much higher by-pass rate than those living far in the rural parts of the Municipality. Results from logistic regression also showed that the urban population is more likely to have a higher socio-economic status than the rural population, and therefore ability to pay for better services. Factoring in distance and still finding that education level of the mother is significantly related to by-pass proved this social status. Mothers in the urban catchment areas who were generally more educated and more likely to be employed or their spouse employed still by-passed their municipal facilities for MOH facilities. For example, Migosi, which is 1.8km from the Provincial hospital, had a higher by-pass rate of 93.3% compared to Lumumba and Mosque, which are 1.4km and 1.3km respectively from PGH and which had by-pass of 79.1% and 82.5% respectively. Migosi is inhabited by people of a much higher socio-economic class than the other areas. Social class clearly results in a higher demand for quality care.

6: CONCLUSIONS AND RECOMMENDATIONS:

6.1: CONCLUSIONS:

1. There is under-utilisation of the municipal health facilities. Most of the residents (53.4%) by-pass these facilities to seek for services elsewhere. Most of those by-passing were going to MOH facilities (Provincial and District Hospitals). The by-pass is higher in the urban part of the municipality, where the District and Provincial hospitals are also situated, than in the rural catchment areas.
2. The community has low opinion of the quality of care offered at the Municipal health facilities. In the household survey, only four facilities had a mean quality index more than half of the maximum possible score of 17. Again, only 19.3% of the respondents gave the overall quality a rating of

“good” in the household survey. The main areas for desired improvements are drug availability and laboratory services.

3. Community’s perception of quality of care affects their utilisation of the facilities. Low quality care from the consumer’s perspective translates to low utilisation of the services and high by-pass rates. In the catchment areas of facilities, which had low quality index, the utilisation rates were also low and by-pass rates were high. Perception also tends to be influenced by the socio-economic status and the presence of alternative facilities. Respondents from the isolated rural catchments tended to give a higher rating to facilities than those from the more urban high-class catchments.

4. The capacity of the facilities to offer services is adequate as the majority scored more than 50% in the facility audit. This capacity however does not influence the utilisation of these facilities. Hence a facility may meet all the professional requirements but still have low demand for services. This emphasises the need to consider client satisfaction parameters as well in efforts to improve coverage of the health services.

6.2: RECOMMENDATIONS:

1. Improve on supplies, equipment, and medicines;

Health workers cannot do their work if they lack basic equipment, supplies and medicines. Several avenues should be explored to address these problems. One such avenue is to include Municipal facilities all over the country in the Essential Drug Program of the Ministry of Health so that they can be getting their supplies direct. A compensation mechanism can be worked out between the two

ministries (Local Government and MOH). In any case the Municipal's provision of health care is a delegated responsibility from the Ministry of Health.

2. Establish continuous education and training for the health workers:

There is need to expose the health workers to various in-service or on-the-job training and other informal training approaches like seminars and workshops. These approaches are important for reinforcing health worker compliance with appropriate management procedures.

3. Set up Facility Management Boards and Municipal Health Management Board.

These will be able to over-see the running of health services in the Municipality. This will ensure community participation in the running of the facilities and also act as a link between the community, the Municipality and the Ministry of Health.

4. Enhance MOH supervision.

This will ensure appropriate and timely response to any shortcomings in service delivery. Regular supervisory visits from higher-level authorities also provide facilities with incentives to maintain high quality service.

5. Strengthen, or close down Got Nyabondo dispensary.

Got Nyabondo dispensary is currently not giving any meaningful services. A resident nurse, preferably male, should be posted to the facility. If this is not possible, then it should be closed down, or handed over to the Ministry of Health to run it.

6. Conduct further research:

There is need to conduct further research to determine the quality of care provided in the MOH facilities and compare with the findings of this particular study. There is also need to develop a proper weighting criteria for facility audit surveys, as what was used in this study was the according to the judgement of the researcher out of some un-related pieces of literature. Again, the effects of socio-economic status on quality perceptions and expectations need to be studied more comprehensively.

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ANEX 1

FACILITY INVENTORY CHECKLIST.

Name of facility.....

Date.....

Type **1.Health centre.**

Catchment population.....

2.Dispensary

	Indicator	score			Total	%SCORE
		0	1	2		
1	General atmosphere	poor	fair	good		
	a) Appearance of building/paint					
	b)Cleanlines of facility					
	c)Grass cut short					
	d)General mood in facility					
	TOTAL					

2	Infrastructure	absent	present		
	a)Toilet for clients				
	b)water source				
	c)Energy/power source				
	d)Shelter for waiting clients				
	e)Security/safety of drugs/supplies				
	TOTAL				

		0	1	2	Total	
3	Availability of equipment	absent	Present & defective	In working condition		
	a) B P machine					
	b) Thermometer					
	c) Flash-light/examination light					
	d) Adult scale					
	e) baby scale					
	f) Fetoscope					
	g) Examination couch					
	h) stethoscope					
	i) Cold chain equipment					
	j) Needle holder					
	k) Scissors					
	TOTAL					

4	Availability Of Basic Drugs	Absent	Present, Inadequate	Adequate Stock For 1/12	Total	
	a) Antibiotics					
	- Syrups					
	- Tablets					
	- Injectables					
	b) Antimalarials					
	S.p					
	Inj. quinine					
	other					
	c) Analgesics					
	paracetamol					
	ASA					
	Other					
	d) Hematinics - iron					
	- Folate					
	Total					

5		0	1	2	Total	
	Other supplies					
	a)Antiseptic lotion					
	b)Gloves					
	c)Syringes/needles					
	d)Gauze/cotton wool					
	TOTAL					

6	Vaccines					
	a)BCG					
	b)Polio					
	c)DPT					
	d)T.T					
	e)Measles					
	TOTAL					

7	Infection control facility	absent	Present, not in use	In use/working condition		
	a)pit/					
	b)incinerator					
	c)Dustbin					
	d)Sharps disposal container					
	e)Sterilizer					
	TOTAL					

		0	1	2	Total	
8	Management issues					
	When was the last	Last 6 months	Last 3 months	Last 1 month		
	a)facility staff meeting					
	b)Sectional heads meeting					
	c)Supervisory visit					
	MMOH					
	Matron					
	DHMT staff					
	PHMT					
	TOTAL					

9. STAFFING

Cadre	No. present
Doctors	
Registered clinical officers	
Registered Nurse	
Enrolled Nurse	
Laboratory Technician.	
Pharmaceutical Technologist.	
Support staff	
TOTAL	

10. Number of patients attended from July 2001-July 2002

1. Total.....
2. ANC.....
3. Child welfare clinic.....
4. FP.....
5. Deliveries.....

11. In-service Training

Course	No. Trained			
	Doctors	Registered Nurse	Enrolled Nurse	Registered clinical officer
KEPI				
FP/RH				
STI				
MALARIA				
C.D.D				
ARI				
IMCI				
HSM				
Total				

12. Number of Days for :

1) ANC clinics in a week.....

2) Immunization clinics.....

OBSERVATIONS

13. Opening time.....

14. Time first patient/client arrived

15. Time first patient was seen/attended.....

16. Length of tea break.....

17. Length of lunch break.....

18. Closing time.....

ANEX 2

**UNIVERSITY OF NAIROBI
COMMUNITY HEALTH DEPARTMENT**

H H QUESTIONNAIRE

Household No.

Date of interview.....

Location

Name of Interviewer.....

- Eligibility**... 1. Age 15-49
2. At least 1 child or pregnant
3. Duration of stay > 6months

SOCIAL- DEMOGRAPHIC DATA

1 Date of birth of Respondent.....

- 2 Marital Status
1. Married
 2. Single
 3. Widowed
 4. Divorced/Separated.

- 3 Education Status of the respondent
1. None
 2. Primary
 3. Secondary
 4. Tertiary(College, University)

- 4 Occupation of respondent
1. House wife
 2. Employed /salaried
 3. Business woman
 4. Other Specify.....

- 5 Type of dwelling (observe)
1. Temporary(mud-wall, grass-thatched roof)
 2. Semi permanent (mud/ plastered wall/floor , iron-sheet roof)
 3. Permanent (stone-wall, iron-sheet/tiled roof)

- 6 House ownership 1. Family house
2. Rental

7. Household size.....

8. No. of Children under five years.....

9. Current pregnancy status.....

1. Pregnant
2. Lactating
3. None of above

FACILITY UTILISATION

10 Which is your nearest Health Facility (Mark type of facility mentioned in terms of organization managing it) Agency

- Agency 1. Municipal Name.....
2. MOH
3. Mission
4. private

11. Where did/ do you attend ANC for the last/ current pregnancy

Name.....

- Agency 1. Municipal
2. MOH
3. Mission
4. Private

12. Where did/ do you take your last child for immunizations

- Agency 1. Municipal Name.....
2. MOH
3. Mission
4. Private

13. Where did you seek treatment the last time your child was sick?

Name.....

- Agency 1. Municipal
2. MOH.
3. Mission
4. Private

If answer to 10. Is municipal and if either 11,12, or 13 is not municipal,then answer 14,15,16

14. (To be answered by the interviewer) For those not attending MCK facility

Is there by pass of Municipal facility.

1. Yes (if MCK facility nearest)
- 2.No

15. Why didn't you use MCK facilities for the above service(whichever municipal was not used)

1. Poor staff attitude
2. Lack of drugs/vaccines
3. Long waiting time
4. Poor services
5. No laboratory
6. Expensive
7. Long distance
8. Others specify.....

16. What attracted you to this facility where you went for the services?

1. Good / better services
2. Adequate drugs/Vaccines
3. Staff treats people well
4. Cheap
5. Have a Laboratory.
6. Efficient services-attended to fast
7. Is nearest
8. Others specify.....

PERCEPTION ON QUALITY OF CARE

17. Now have you attended your nearest or any other Municipal health facility for MCH (maternal or child health) services in the past three years?

1. Yes
- 2.No

If no, go to Q 18 & 19,if yes go to 20 onwards

18. Why don't you attend municipal facilities

1. poor staff attitudes
2. lack of drugs /supplies
3. long waiting time.
4. poor facilities
5. no laboratory

- 6.expensive
- 7.long distance/far
- 8.Others specify

19.How did you know this if you have not used the facility

- 1.from friends.
- 2.relatives
- 3.local leaders
- 4.I just believe so
- 5.Other specify.....

20. If yes how many times have you attended the facility in the last 2 years.....

21.During your last visit to municipal facility how did the staff handle you?

- 1.Well
- 2 Fairly
- 3 Poorly

22.Did the provider explain your/ your child's problem or health status?

- 1.Yes
- 2.No

23 Did you feel free to ask questions?

- 1.Yes
- 2.No

24 Did the provider examine you/your child well/thoroughly?

- 1.Yes
- 2.No
- 3.Don't know

25. Did you think he/she knows his/her work well?

- 1. Yes
- 2.No
- 3.Don't know

26 .Did you get all the drugs prescribed for you?

- 1.Yes
- 2.No

27. If no which drugs were missing
1. For malaria
 2. Vaccines (including T.T)
 - 3 For anemia (Iron supplements)
 - 4 For pains / Headache
 - 5 Antibiotics
 - 6 .Others specify.....

.....
28 How would you rate general drug availability in the facility

1. Good
2. Fair
3. Poor

29 .How long did you wait for services?

1. Short/reasonable
2. Too long
- 3 Don't know

30. Does the facility open for a reasonable time during the day?

1. Yes
2. No
3. Don't know

31 What is the quality of the building?

1. Good
2. Fair
3. Poor

32. How can you judge the cleanliness of the facility?

1. Clean
2. Fairly clean
3. Dirty

33 How do you generally rate the overall quality of service provided at the facility?

1. Good
2. Fair
3. Poor

34. What would you like to see improved in the facility?

1. Drug availability
2. Staff attitude

- 3. Waiting time
- 4. Schedule/hours of service
- 5. Cleanliness
- 6. More staff
- 7. Laboratory services
- 8. Don't know
- 9. Maintenance
- 10. Others specify

MEDICAL LIBRARY
UNIVERSITY OF NAIROBI

35. If you fell sick today which facility would you go to?

Name

- Agency
- 1. Municipal
 - 2. GOK
 - 3. Mission
 - 4. Private

ANNEX 3.

**UNIVERSITY OF NAIROBI
COMMUNITY HEALTH DEPARTMENT**

EXIT INTERVIEW QUESTIONNAIRE.

Respondent No.....

Date of interview.....

Clinic.....

1. Date of birth of respondent.....

2. Marital status
1. Single.
 2. Married.
 3. Widowed.
 4. Divorced/separated

3. Education status
1. None
 2. Primary.
 3. Secondary.
 4. Tertiary.

4. What was the reason for your visit today
1. Routine ANC visit
 2. Immunization for child
 3. For treatment
 4. For child's treatment
 5. Other specify

5. Did the provider examine you /your child well
1. Yes.
 2. No.

6. FOR ANC MOTHERS

Did he/she do the following examination?

1. Measure weight
2. Measure blood pressure
3. Examine legs for oedema
4. Check eyes for anaemia
5. Take height (for first ANC visits).

7. FOR MOTHERS WHO BROUGHT CHILDREN

Did the provider do the following examinations on the child

1. Take the child's temperature
2. Take the child's weight
3. Check the child's eyes for anemia.

8. Did the provider explain what he/she was doing?

1. Yes
2. No

9. Did the provider look competent to handle you/your child?

1. Yes
2. No

10. Did he/she try to understand your/your child's problem?

1. Yes
2. No

11. Did he/she discuss with you your / your child's problem?

1. Yes
2. No

12. Did you feel free to ask questions?

1. Yes
2. No

13. Did he/she answer your questions satisfactorily (were you satisfied with the answers given)?

1. Yes
2. No

14. Were you satisfied with the service you received from the provider?

1. Yes
2. No

15. Was there enough privacy in the examination room?

1. Yes
2. No

16. Were you treated in a friendly way by the provider?

1. Yes
2. No

17. About how long did you wait between the time you first arrived and the time you were attended by the provider.....

18. Did you feel this waiting was reasonable or too long?

1. Reasonable
2. Too long.
3. Don't know.

19. Observed waiting time.....

20. Were you given an appointment for follow-up visit?

1. Yes
2. No.

ANNEX 4:**UTILISATION OF MCH SERVICES BY FACILITY CATCHMENT AREAS:**

Table 1: Utilisation of ANC services by facility catchment

Catchment area	No. using facility for ANC services							TOTAL
	MCK	MOH				Mission	Private	
		PGH	KDH	OTHER	TOTAL			
Lumumba	14 (34.1%)	16 (39%)	3 (7.3%)	3 (7.3%)	22 (53.7%)	0 (0%)	5 (12.2%)	41 (100%)
Ober K.	41 (91.1%)	2 (4.4%)	0 (0%)	1 (2.2%)	3 (6.7%)	0 (0%)	1 (2.2%)	45 (100%)
Migosi	2 (4.4%)	20 (44.4%)	4 (8.8%)	2 (4.4%)	26 (57.8%)	1 (2.2%)	16 (35.6%)	45 (100%)
Gita	24 (64.9%)	9 (24.3%)	2 (5.4%)	0 (0%)	11 (29.7%)	1 (2.7%)	1 (2.7%)	37 (100%)
Lela	19 (43.2%)	6 (13.6%)	7 (15.9%)	11 (25%)	24 (54.5%)	0 (0%)	1 (2.3%)	44 (100%)
Bandani	7 (15.6%)	14 (31.1%)	15 (33.3%)	3 (6.7%)	32 (71.1%)	0 (0%)	6 (13.3%)	45 (100%)
Nyalenda	14 (32.6%)	3 (7.0%)	14 (32.6%)	4 (9.3%)	21 (48.8%)	0 (0%)	8 (18.6%)	43 (100%)
G.Nyabondo	13 (37.1%)	4 (11.4%)	0 (0%)	15 (42.9%)	19 (54.3%)	1 (2.9%)	2 (5.7%)	35 (100%)
Mosque	5 (13.2%)	13 (34.2%)	8 (21.1%)	6 (15.8%)	27 (71.1%)	1 (2.6%)	5 (13.2%)	38 (100%)
Chiga	32 (78.0%)	4 (9.8%)	0 (0%)	4 (9.8%)	8 (19.5%)	0 (0%)	1 (2.4%)	41 (100%)
Ojola	13 (31.7%)	4 (9.8%)	0 (0%)	22 (53.7%)	26 (63.4%)	0 (0%)	2 (4.9%)	41 (100%)
TOTAL	184 (40.4%)	95 (20.9%)	53 (11.6%)	71 (15.6%)	219 (48.1%)	4 (0.9%)	48 (10.5%)	455 (100%)

Table 2: Utilisation of Immunisation services by facility catchment.

Catchment area	No .of people using facility for immunisation services							TOTAL
	MCK	MOH				Mission	Private	
		PGH	KDH	OTHER	TOTAL			
Lumumba	18 (42.9%)	14 (33.3%)	1 (2.4%)	4 (11.9%)	19 (45.2%)	0 (0%)	4 (11.9%)	42 (100%)
Ober K.	40 (88.9%)	3 (6.6%)	0 (0%)	1 (2.2%)	4 (8.9%)	0 (0%)	1 (2.2%)	45 (100%)
Migosi	9 (20.5%)	15 (34.1%)	5 (11.4%)	2 (4.5%)	22 (50.0%)	0 (0%)	13 (29.5%)	44 (100%)
Gita	32 (74.4%)	7 (16.3%)	2 (4.7%)	0 (0%)	9 (20.9%)	0 (0%)	2 (4.7%)	43 (100%)
Lela	24 (53.3%)	4 (8.9%)	5 (11.1%)	10 (22.2%)	19 (42.2%)	0 (0%)	2 (4.4%)	45 (100%)
Bandani	14 (29.2%)	10 (20.8%)	13 (27.1%)	4 (8.3%)	27 (56.3%)	0 (0%)	7 (14.6%)	48 (100%)
Nyalenda	20 (44.4%)	2 (4.4%)	14 (31.1%)	4 (8.8%)	20 (44.4%)	0 (0%)	5 (11.1%)	45 (100%)
G.Nyabondo	20 (51.3%)	2 (5.1%)	11 (28.2%)	4 (10.3%)	17 (43.6%)	1 (2.6%)	1 (2.6%)	39 (100%)
Mosque	13 (33.3%)	9 (23.1%)	8 (20.5%)	2 (5.1%)	19 (48.7%)	1 (2.7%)	6 (15.4%)	39 (100%)
Chiga	35 (89.7%)	1 (2.6%)	0 (0%)	1 (2.6%)	2 (5.1%)	1 (2.6%)	1 (2.6%)	39 (100%)
Ojola	28 (66.7%)	2 (4.8%)	0 (0%)	11 (26.2%)	13 (31.0%)	0 (0%)	1 (2.4%)	42 (100%)
TOTAL	253 (53.7%)	69 (14.6%)	59 (12.5%)	43 (9.1%)	171 (36.3%)	3 (0.6%)	44 (9.3%)	471 (100%)

Table 3: Utilisation of child treatment services by facility catchment

Catchment area	No. using facility for treatment of children							TOTAL
	MCK	MOH				Mission	Private	
		PGH	KDH	OTHER	TOTAL			
Lumumba	15 (36.6%)	12 (29.3%)	7 (17.1%)	1 (2.4%)	20 (48.8%)	0 (0%)	6 (14.6%)	41 (100%)
Ober K.	26 (57.8%)	4 (8.9%)	0 (0%)	1 (2.2%)	5 (11.1%)	0 (0%)	14 (31.1%)	45 (100%)
Migosi	9 (20.5%)	15 (34.1%)	2 (4.5%)	0 (0%)	17 (38.6%)	1 (2.3%)	17 (38.6%)	44 (100%)
Gita	17 (39.5%)	4 (9.3%)	4 (9.3%)	3 (7.0%)	11 (25.6%)	0 (0%)	15 (34.9%)	43 (100%)
Lela	16 (40.0%)	6 (15%)	3 (7.5%)	6 (15%)	15 (37.5%)	0 (0%)	9 (22.5%)	40 (100%)
Bandani	17 (36.2%)	5 (10.6%)	9 (19.2%)	0 (0%)	14 (29.8%)	1 (2.1%)	15 (31.9%)	47 (100%)
Nyalenda	15 (34.9%)	5 (11.6%)	11 (25.6%)	1 (2.3%)	17 (39.5%)	3 (7.0%)	8 (18.6%)	43 (100%)
G.Nyabondo	20 (52.6%)	2 (5.3%)	0 (0%)	10 (26.3%)	12 (31.6%)	0 (0%)	6 (15.8%)	38 (100%)
Mosque	15 (40.5%)	5 (13.5%)	8 (21.6%)	0 (0%)	13 (35.1%)	0 (0%)	9 (24.3%)	37 (100%)
Chiga	32 (78.0%)	2 (4.9%)	1 (2.4%)	1 (2.4%)	4 (9.8%)	0 (0%)	5 (12.2%)	41 (100%)
Ojola	27 (71.1%)	1 (2.6%)	1 (2.6%)	8 (21.1%)	10 (26.3%)	0 (0%)	1 (2.6%)	38 (100%)
TOTAL	209 (45.7%)	61 (13.3%)	46 (10.1%)	31 (6.8%)	138 (30.2%)	5 (1.1%)	105 (23.0%)	457 (100%)

ANNEX 5:

RESULTS FROM FACILITY INVENTORY:

GENERAL ATMOSPHERE

INDICATOR	NO. OF FACILITIES SCORING		
	Poor	Fair	Good
Appearance of building	6	4	1
Cleanliness of facility	0	4	7
Grass cut short	2	5	4
General mood	1	10	0

INFRASTRUCTURE:

INDICATOR	NO. OF FACILITIES SCORING		
	Absent	Present	Present/working
Toilet for clients	1	0	10
Water source	5	2	4
Energy/power source	8	1	2
Shelter for waiting clients	2	0	4
Security/safety of drugs	2	0	9

AVAILABILITY OF EQUIPMENT:

INDICATOR	NO. OF FACILITIES SCORING		
	Absent	Present/defective	Present/working
BP machine	8	1	2
Thermometer	3	0	8
Flash/examination light	10	0	1
Adult scale	3	1	7
Baby scale	1	1	9
Fetoscope	0	0	11
Examination couch	1	1	9
Stethoscope	8	2	1
Cold chain equip.	2	1	8
Needle holder	9	1	1
Scissors	7	0	4

AVAILABILITY OF BASIC DRUGS:

INDICATOR	NO OF FACILITIES WITH		
	Absent	Present/inadequate	Present/adequate for 1/12
Antibiotic syrup	7	4	0
Antibiotic tabs/caps	4	6	1
Antibiotic inj.	1	6	4
SP	4	5	2
Inj. quinine	6	5	0
Other antimalarials	6	4	1
Paracetamols	3	4	4
ASA	7	3	1
Other analgesics	11	0	0
Iron tablets	7	0	4
Folic acid	6	1	4

AVAILABILITY OF OTHER SUPPLIES

INDICATOR	NO. OF FACILITIES WITH		
	Present	Present/inadequate	Present/adequate for i/12
Antiseptic lotion	6	2	3
Gloves	1	1	9
Syringes/needles	3	6	2
Gauze/cotton wool	1	5	5

VACCINES:

INDICATOR	NO. OF FACILITIES WITH		
	Present	Present/inadequate	Present/adequate for 1/12
BCG	9	0	2
OPV	0	0	11
Pentavalent	0	0	11
T T	0	0	11
Measles	0	0	11

INFECTION CONTROL FACILITY:

INDICATOR	NO OF FACILITIES WITH		
	Absent	Present/not in use	Present/working
Rubbish pit	1	1	9
Incinerator	8	1	2
Dustbin	1	0	10
Sharps disposal container	0	0	11
Sterilizer	9	1	1

MANAGEMENT ISSUES:

INDICATOR	NO OF FACILITIES WITH		
	Last 6/12	Last 3/12	Last 1/12
Facility meeting	0	1	10
Sectional heads meet	1	8	2
MMOH supervision	9	1	1
Matron supervision	2	3	6
DHMT supervision	9	1	1
PHMT supervision	11	0	0