

Bamako Initiative Operations Research Project (BIORP)

**EQUITY OF ACCESS
TO PUBLIC, PRIVATE NOT-FOR-PROFIT AND
PRIVATE FOR PROFIT HEALTH FACILITIES IN TWO
REGIONS OF TANZANIA.**

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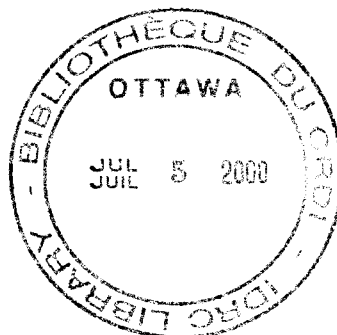
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CONTENTS

| | Page |
|---|------|
| Acknowledgements..... | iii |
| List of Abbreviations..... | iv |
| Executive Summary..... | v |
| 1.Introduction and literature review..... | 1 |
| 2.Objectives..... | 6 |
| 3.Methodology..... | 7 |
| 4.Results..... | 11 |
| 5.Discussion..... | 77 |
| 6.Conclusion..... | 98 |
| 7.Recommendations..... | 100 |
| 8.References..... | 102 |
| 9.Annexes..... | 106 |

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LIST OF ABBREVIATIONS

| | |
|--------|---|
| MOH | -Ministry of health |
| IMR | -Infant Mortality Rate |
| PHC | -Primary health care |
| DANIDA | -Danish International Development Agency |
| UNICEF | -United Nations Children's Fund |
| WHO | -World Health Organization |
| USAID | -United States Agency for International Development |
| SIDA | -Swedish International Development Authority |
| MCHA | -Maternal and Child Health Aide |
| RMA | -Rural Medical Aide |
| CMR | -Child Mortality Rate |
| TDHS | -Tanzania Demographic and Health Survey |
| FGD | -Focus Group Discussions |
| M-H | -Mantel Haenszel |
| CI | -Confidence Interval |
| DF | -Degrees of freedom |

EQUITY OF ACCESS TO PUBLIC, PRIVATE NOT-FOR-PROFIT AND PRIVATE FOR PROFIT HEALTH FACILITIES IN TWO REGIONS OF TANZANIA.

Executive Summary

To assess the extent to which equity of access to health care services is being maintained in public, voluntary and private health facilities we conducted a cross-sectional survey in Mara and Kilimanjaro regions, Tanzania. This report contains the findings of the study which involved 609 patients, and 65 health care providers from 6 hospitals in the two regions. It also gives the findings of interviews carried out among 336 community subjects residing in two catchment areas which had equal access to the three types of hospitals in the two regions. Structured interviews were administered to obtain specific information from the three different study samples, in addition focus group discussions were also held with health workers and the administrators of the three types of hospitals.

Equity in access of health care services measured in terms of distance to the nearest hospital, time taken to travel to the health facility, means of travel and reason for choice of the hospital. All these attributes were analyzed by type of hospital, socio-demographic characteristics and by type of illness. Quality of care based on the number of prescribed drugs and their availability as well as client satisfaction were also assessed. In assessing clients' satisfaction, patients were asked about their waiting time, consultation time, and whether they were told their diagnosis, and adequate information about their illness, use of drugs, management plan, possible side effects and a date for their next appointment. Information was also obtained regarding on what was the user fees, mode of payment and willingness to pay. Subjects were also asked about the cost of treatment, and whether they felt it was cheap, average or expensive. Additional information was obtained regarding mode of payment, source of funds, and whether they thought they needed an exemption and who should grant it? Respondents were asked if had been refused treatment because they could not pay their user charge. Finally through interviews and focus group discussion, we examined the of question exemption systems, and how it isolates the real indigent and the extent to which community involvement was being maintained.

Equity of Access and reasons for choice

The results showed that there was equity in access to public, voluntary and private hospitals in Mara and Kilimanjaro regions. This was based on distance and time taken to travel to the nearest hospital. Accessibility was not affected by other background characteristics like subject's sex, type of illness or type of hospital attended. Both men and women, had equal to access. Of the patients and community subjects interviewed, 65% of them reported that they lived within a distance of 5km from a health facility while 78% of the community subjects and 90% of patients lived within a distance of 10km from the nearest health facility. Based on time taken to travel to hospital, 90% of the patients interviewed in this study reported that they got to the hospital in less than an hour. Overall, half the patients walked to hospital, 22% used public transport, 16% hired a bicycle or vehicle and 8% used a privately owned vehicle. The proportion of population with access to hospitals in Mara and Kilimanjaro

regions appeared to be similar to the national figure for accessibility because 72% of the population in Tanzania lives within a distance of 5km from a health facility and 90% lives within 10km.

Respondents were asked to why they chose to attend treatment in the three types of hospitals and both patients and community subjects mentioned similar reasons. Among patients, short distance was mentioned by 61% of the subjects, drug availability 58%, health workers were polite 37%, and short waiting time 35%. Similarly among community subjects, "good service" was mentioned by 81% of the subjects, drug availability 72%, lack of alternative service 40%, health workers were polite 25% and services were relatively cheap was mentioned by 24% of the subjects. Drug availability was the commonest reason for choice of voluntary and private hospitals; the percentages were 80% and 84% respectively. In Public health facilities it was among the least given reason for utilizing them (7%) suggesting that lack of drugs was the biggest impediment towards use of this type of facility. A similar reason for not using public health facilities was reported by Abel-Smith et al (1992) in 81% of the answers.

Although three quarters of community subjects could travel to hospital within one hour, it is important to note of the fact that it was not a matter of preferred choice for 40% of the subjects, instead, they visited their nearest hospital because they had no other alternative.

Quality of Care

Nearly 80% of the patients attending public hospitals were not satisfied with the quality of services because their prescribed drugs were not available. There was also inequity in availability of prescribed drugs for both acute and chronic illnesses when comparing the three different types of facilities. Nearly 80% of acute illness patients in public health facilities as compared with 4% in voluntary and 2% in private health facilities could not get their prescribed drugs available. Similarly, in chronic illness patients, 38% could not get their drugs in public compared with 2% in voluntary and none in private health facilities. Overall, three times as many patients suffering from acute compared with chronic illness could not get their prescribed drugs

Although the national treatment guideline recommends at least two drugs per diagnosed condition, in this study it was observed that nearly 70% of all patients were given a prescription form with 3-5 drugs (items). In all the three types of facilities, the average number of prescribed drugs (items) (\pm standard deviation) per form was higher than the number which was reported among hospital outpatients in Dar es Salaam (Massele and Mwaluko, 1994), 2.9 ± 0.83 and 2.4 ± 0.16 drugs respectively. The average number of drugs per prescription in this study was also larger than that of health centers and dispensaries in Dar es Salaam, 2.1 ± 0.5 and 1.9 ± 0.5 drugs respectively.

Private hospitals appeared to issue a larger number of drugs per prescription form than voluntary and public health facilities. The number of drugs (items) per prescription form for patients seen in private hospitals (3.4 ± 0.9) was much higher than voluntary (2.8 ± 0.8) and

public hospitals (2.7 ± 0.7). The average number of drugs was also larger than the number reported from voluntary (2.6) and public hospitals (1.7) in Dar es Salaam (Kanji et al 1995).

Client satisfaction

Generally patients seemed to have been equitably satisfied with the quality of services based on perceived provider's technical competence, prescribing practices, and provider-client interactions. In all the three types of hospitals, more than 90% of subjects were told their diagnosis and also they were explained how their condition was going to be managed. Similarly 95% of the patients reported that they received adequate instructions about use of their prescribed drugs, the figure being 82% for those attending treatment for the first time. Ninety eight (98%) of patients responded that they were given adequate time to enable them to explain their complaints well indicating that the interpersonal relations between clients and health care providers were generally good.

Clients perceived waiting time was significantly different in the three types of health facilities. In public health facilities was almost twice that of private health facilities. The average waiting time in public, voluntary and private hospitals was 19.3 ± 25.2 minutes, 17.4 ± 12 minutes and 10.5 ± 15.8 minutes respectively. The average waiting time in public health facilities was the longest compared to voluntary and private hospitals.

When respondents were asked whether they had received equal treatment compared with someone else with a similar illness, 58% responded positively and 42% were negative but the difference between the three types of health facilities was not significant.

User fees, mode of payment and willingness to pay

Two thirds of the patients interviewed thought user-charge was moderately expensive. Infact, they had paid an average of Tshs. 500, 2100 and 3200 for treatment obtained from public voluntary and private hospital, The average user charges for clients who felt that the charges were expensive were, Tshs. 2600, 5400, and 9500 for public, voluntary and private hospital respectively.

The majority of patients (93%) reported that they paid user fees out of pocket. The fact that they paid out of pocket put them at serious risk because they were not assured of having money for treatment throughout the year. Nearly 56% of subjects seemed to be able to pay user fees by selling crops or livestock and 37% depended on borrowing or getting assistance from relatives.

Regarding user charge for malaria treatment, community respondents were asked if they perceived it was cheap, average or expensive. A half of the community subjects (49.4%) felt it was expensive and two thirds said that they would not be willing to pay more in order to make the services better.

Referral Systems

There is no clear referral system among public, voluntary and private hospitals. This lack of a clear referral system suggest that there is no clear superiority of health services of one category of health facility compared to another. Pricing system also did not seem to take into consideration the referral status of the patient.

Exemption systems

Some form of exemption system of the poor existed only in public and voluntary hospitals and in private hospitals such mechanisms were non-existent. In public hospitals, this system is still new as cost sharing exercise was introduced in July 1994 while in voluntary hospitals it has been operational for many years. Some good lessons on cost sharing and exemption of the poor could be learned from voluntary hospitals.

The current exemption system is not specific enough in identifying poor people. This is even more difficult in public hospitals where user charges are relatively lower compared to voluntary and private hospitals. The situation is more exacerbated by the fact that people are generally poor and as many as 57% of those who seek treatment from public hospitals have no other alternative. A lot of management and administrative issues still need to be addressed locally. How the funds generated are being utilized was not studied. In Government hospitals health workers reported that they normally get problems in identifying, without any doubt, people who can not really pay from those that are just not willing to pay because they know there may be no drugs or because they are not sure if the services will be available.

Although 62% of the community respondents earned less than Tshs 17500 per month, (< US \$30 per month which is the basic minimum salary in Tanzania), only 5% of patients reported that they had ever been exempted from paying user charges. However, 66% of chronic illness patients compared with 36% of acute illness and 46% of female compared with 37% of male patients had wanted to be exempted from paying user fees. Some people were refused treatment because they could not pay; the figure was 5% in public, 4% in voluntary and zero percent in private health facilities.

Patients who attended treatment in private health facilities were less likely to ask for exemption of user charges even though they had paid more compared to voluntary and public health facilities. This suggests that clients seen in private hospitals were more prepared to pay user charges than those attended at voluntary and public hospitals.

When patients were asked who should grant exemption of user charge, the majority 57% mentioned the Government, 21% hospital employees, 15% could not decide and 7% said the community or social worker. Similarly when the community was asked the same question regarding who should grant exemptions, 90% mentioned the Government, 4% said the village and another 4% mentioned health workers while 2% did not know

Exemption system was found to work better in voluntary hospitals than in public hospitals because the system is decentralized and it takes into consideration the local situation, rather

than using the nationally set standards of public hospital criteria. In public hospitals health workers appeared not to understand the existence of any exemption of user fees for people who are unable to pay.

Community involvement

Community's understanding of who are the poor people in the village was high but 99% of the people in the community said they were not at all involved in the exemption system. It is also true that public exemption system was nationally decided and uniformly used in every region and therefore the respective local communities were not involved in setting the criteria for exemption. Health workers themselves did not if the community was involved. For example, of the health workers interviewed, only a third of them knew if the community was involved or not in granting exemptions. Surprisingly, none of the workers interviewed in private hospitals knew about this.

Regarding representation in their hospital management committee, 46% of the health workers in public hospitals, 20% in voluntary hospitals and none at all in private hospitals reported that the community was represented. The extent to which women are involved in the exemption system at community and health facility level could not be established.

In private hospitals, market forces which involves demand, supply and price appeared to play a big role operationally. Some patients deferred payment of user fees but we could not establish whether they came back or not.

Conclusion

In conclusion, the study has shown that based on distance and time taken to travel to hospital, there was equity of access to health care services in public, voluntary and private hospitals regardless of background characteristics. Perceived client satisfaction was very high based on waiting and consultation time, provider-client interaction and interpersonal relations and perceived technical competence. Short distance, availability of drugs, good service and health worker's politeness were critical factors influencing choice of hospitals by patients and the community. Of concern is that only 20% of clients in public hospitals could get their drugs while in private and voluntary hospitals they were plentiful and they were irrationally prescribed.

It has also been shown that when alternative sources of health care services are readily available, patients tend to sort themselves out according to their needs and economic power. The only precondition is that those services should be accessible geographically and that the prescribed drugs should be readily available.

Recommendations

1. To minimize inequity of access to health care services, it is recommended that the Ministry of Prime Minister's Office, Ministry of Health, Ministry of Community Development, Women and Children and Ministry of Local Government should work out a mechanism of mobilizing community involvement so as to make sure that all public health

facilities in the two regions have an adequate supply of drugs available because this was the main reason for choosing private and voluntary health services. Through community involvement, people will be able to understand the problem, identify alternative solutions, and be able plan, implement, monitor and evaluate the success of their own inputs towards maintaining equity and better health care services in their regions.

2. The fact that the average number of prescribed drugs per form was extraordinarily high, being worst in private, followed by voluntary and public hospitals, it is recommended that the national treatment guidelines be re-visited and retraining of providers on the importance of making correct diagnosis be emphasized. Health providers in all the three types of hospitals should also receive continuing education on cost sharing; pricing and referral systems; interpersonal relations; irrational prescribing and community involvement in primary health care. Through workshops and seminars an incentive mechanism will be established to encourage transfer of patients from either public, voluntary and private hospitals freely. In the meantime, waiver of some of the taxes in voluntary or private hospitals may be necessary so as to get them to implement some of the public responsibilities.
3. The fact that no single measure could be used to provide a full picture of equity in access to health care, it recommended that in assessing equity in health care services different indicators have to be considered so as to capture both technical competence and perceived client satisfaction. Linkage between equity and quality of care should be validated and where possible the three types of health care facilities be covered.
4. It also recommended that further research be done to examine the effect of cost sharing on vulnerable groups of population, including mothers and children, and the school age group.
5. Regarding the issue of cost of care and mode of payment, the price of services should consider cost of services and also ability for patient to pay. Because ability to pay is varied, it is recommended that a form of insurance system be established so as to protect the 93% of patients who are at risk of paying from their pocket whenever they fall sick. These people are at risk because of lack of liquidity when they get sick at times when they do not have savings from harvested crops or previously sold live stock or someone to borrow from.
6. The current exemption system should be improved by incorporating some of voluntary hospital experiences such as producing a letter of recommendation for exemption not only from community or religious leaders but also from any other registered organizations which can give adequate information about the client's economic status. In addition, the question of who should decide on who to exempt should be decentralized because local people are the ones who know best about the real situation of their people at that level.

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Introduction and Review of literature

Definition of Equity

The concept of equity in the context of health for all policy can mean different things to different people. The term equity in health care has been defined as "equal access to available care for equal need (irrespective of income, educational level, age sex, geographical location, health status, or some combination thereof) (Whitehead, 1990; Mooney, 1987; Musgrove, 1986). Equity does not mean that every one should have the same health status, for example, or consume the same amount of health service resources irrespective of need.

Similarly, inequity has also been defined to include a moral and ethical dimension. It refers to differences which are unnecessary and avoidable but in addition are also considered unfair and unjust. So in order to describe a certain situation as being inequitable, the cause has to be examined and judged too be unfair in the context of what is going on in the rest of the society (Whitehead, 1990).

Tanzania's struggle to maintain equity in development

Between 1961 and July 1993, the Government of Tanzania has been providing free health care as an integral part of the overall development strategy with a major aim of attaining equity in health care consumption. With assistance from Donor Countries (development expenditure estimated to be over 60%) the health services have expanded rapidly. Similarly following independence, Tanzania has undergone many changes which have had a major impact on its socio-economic development. For example, the total population has increased from 9 million in 1957 to 27 million in 1996. Life expectancy of has increased from 35 years in 1961 to 52 years in 1988 and infant mortality rate has declined from 215 per 1000 live births in 1961 to 105 per 1000 live births in 1988 (MOH, 1990, Bureau of Statistics 1992) and literacy rate has improved from about 25% to 85% during the same period. In 1995 IMR was projected to be 94 per 1000 live births (Tanzania Health Statistics Abstract 1995). Although these figures reflect impressive strides, it is important to appreciate that there are significant urban-rural differentials as well as regional variations in each of the above indicators.

Tanzania is a strong advocator of equity in development and this is embodied in its policies. The major policy which contributed to structural, political, environmental and economic change in Tanzania was the Arusha Declaration of 1967. It advocated for the policy of socialism and self reliance, and equity in distribution of basic human needs (health, education and water) so as to bring about development especially among the rural population. Following the Arusha Declaration, there came the policy of decentralization in 1972. In this policy, decision making in management was shifted from the central to regional level. Similarly, the implementation of villagization activities was called upon by the annual

conference of the ruling party in 1971. Other social policies including Food is Life ("Chakula ni Uhai"), "Mtu ni Afya" campaign of 1974, Universal primary education of 1977, Adult literacy Campaign (Elimu ya watu wazima") were introduced to speed up development equitably.

Successes and failures in health development

With the advent of Alma Ata Declaration of Primary Health Care in 1978, Tanzania developed specific guidelines for its implementation in 1983 (Ministry of Health, 1983). The evaluation of PHC in 1984 reflected significant improvements in the health sector. It also identified areas which needed improvement (MOH/DANIDA/UNICEF/WHO/USAID/SIDA, 1984). The PHC review showed that 72% of the population lived within a distance of 5Km from a health facility and 90% within 10Km. Inventory of health infrastructure carried out in 1979/80 showed there a massive increase of dispensaries from around 800 in 1961 to 2644 in 1980.

Significant increase in health manpower also took place. For example the number of medical doctors increased from 12 in 1961 to 1255 in 1990. Currently the doctor to population ratio is 1:21,423 and nurse to doctor ratio is 1:2,133. Between 1972 and 1990 there was also massive increase in training of auxiliary medical cadres, mainly of Maternal and child health aides (MCHAs) and Rural Medical Aides (RMAs). This exercise was purposely initiated under the support of several donor agencies so as to enable them to run the peripheral dispensaries and health centers. The current number of MCHA and RMAs is 4,110 and 5391 respectively. Given that there are 176 hospitals, 276 health centers and 3014 dispensaries, the goal was that each dispensary and health center should have at least one RMA and an MCHA. The catchment population for a dispensary is roughly 6-10,000 population and for a health centre it is about 50,000 population. Most rural health centers and dispensaries are run by the local Government. About 60% of the health services in Tanzania are provided by the Government, 35% by voluntary organizations and 5% by parastatal and occupational health sectors.

Economic constraints and Changing economic policies

While these changes were taking place, Tanzania's economy has also been adversely affected by a number of factors. The country's economy was badly hit by high inflation rates of almost 30% and huge foreign debts have accrued. In fact it is now ranked as the second poorest country in the world. In the 1970's, it was affected by drought; the country was involved in a war with Uganda; and there was a serious increase in oil prices. The price of its major cash crops (e.g. cotton, coffee, and sisal) also fell in the world market, while concurrently there was deterioration of means of production from agriculture and industries because of poor technological advancement. Additionally, transport and communication facilities were also serving as major impediments towards economic development.

In 1970 Tanzania adopted a new social policy aiming at correcting the rural-urban gap which had widened in the 1960's. With the advice of the International Monetary Fund (IMF) Tanzania adopted Economic Recovery Programme (ERP) in 1986. However at the conclusion

of the ERP it was noted that the Social Sectors were declining. There was therefore an agreement with the IMF and donors to adopt a Social Action Programme (SAP) which was prepared by the Government of Tanzania with advise of IMF and the World Bank.

During the mid-1980s, policy makers and government officials also became more interested in health sector cost recovery as a means of improving health services and alleviating strain on government budgets. For example, the 1987 Bamako Initiative promoted by UNICEF drew widespread international attention to the idea of improving primary health care through community financing of essential drugs. Since that time many countries in sub-Saharan Africa have instituted cost recovery measures such as user fees or health tax for primary health care services (Creese, 1990). The growing number of developing countries contemplating or implementing cost recovery policies has prompted a debate over the effect of cost recovery on the efficiency and equity of health services, particularly the degree to which cost recovery further restricts access by the poor to health services (Griffin, 1988).

Bamako initiative and areas of concern

Critics of the Bamako initiative have raised four major concerns (Hanson and McPake, 1993). The most important issue is the question of equity in access to health care services. Many assumptions have been made about willingness to pay in relation the community's ability to actually pay for services offered. Additionally, there are seasonal variations in the way people generate income; at certain times of the year, there may not be any money for health care services and even for food. Peasants depend on how much they harvested as food and cash crops and how much they produced in terms of livestock. Sometimes food crops harvested do not last for a period of 6 months. The other assumption is that because people pay for services from traditional healers, they will also pay for allopathic services. This may not be true. Sometimes payment may be made in kind or deferred in traditional healers, but this may not be practical in modern health care system.

The second concern was the lack of integration of Bamako initiative activities with the rest of other programs in the health care system; the risk of it becoming another vertical programme was envisaged. Thirdly, it was anticipated that management of funds generated through revolving funds may be a problem because of lack of management skills (how to keep accounts, manage them and be accountable for the appropriate use of funds). A hidden agenda is the problem of gender inequity that women's participation may be minimal in such community based activities (Msamanga and Tungaraza 1996). The fourth problem relates to the issue of sustainability following withdrawal of donor funds. Most of these projects aim at partial cost recovery, and therefore if supply of the essential drugs comes to an end this may be a problem.

Introduction of Cost sharing in Tanzania

The 1977 ban of private practice was uplifted in 1992 thus encouraging public private mix in health care provision. As a result, there has been mushrooming of dispensaries, pharmacies, drug shops ("Duka la Dawa") and laboratories. Some of these facilities are not proficient or efficient. This means they are not maintaining good technical and logical quality. In addition

they do not seem to maintain minimum standards of care.

The appropriate financing system to achieve equity goal in health care consumption is not obvious, whether for "free or fee". User charges are known to have regressive effect on the welfare of the people who have low ability to pay (Gartlep and van der Gaarg, 1987). In Tanzania, introduction of user fees had previously met some resistance from members of parliament and the Central Committee of the Ruling Party. In 1988, for example, the Ministry of Health urged the Government of Tanzania to charge 20 Tanzanian Shillings as a registration fee for all patients attending a Government health facility. However, according to the Minister's Budget speech, " this suggestion was not implemented as previously decided because the Government required a more detailed research study to enable it to make a concrete decision". [The quotation is translated from Swahili] (Minister of Health's Budget Speech 1993).

A few studies conducted in Tanzania have shown that people are willing to pay for their health care (Abel-Smith et al 1992; Mujinja 1990) but their ability to pay has not been well studied in practice. Because of inadequate drugs and food in hospitals, many patients have had to incur substantial cost to use the "free" services in addition travel costs (Abel-Smith and Rawal, 1990). The authors advised the Government of Tanzania to introduce a modest charge for services but with an attempt to exempt the poor. Using this approach, the authors felt the system would be less inequitable than existing situation if the revenue could be used to ensure that supplies were always adequate at the Government health services (Abel-Smith and Rawal 1990). The question of who is poor, how to identify these poor and exact mechanisms of exemption were not clarified.

Since July 1993, cost sharing through user charges in the public health care system has been introduced in phases, initially with referral and regional hospitals. Thereafter in July 1994, charges were introduced in district hospitals and the plan was to extend to health centers and dispensaries in 1995. The aim of introducing user charges was to ensure quality and sustainability of the public health sector.

In recent years it has become difficult to maintain adequate supply and quality of government health services partly due to underfinancing of the health sector in present economic crisis and structural adjustment policy (Mmuni, 1991). Consumers seeking for care seem to be dissatisfied with the quality and quantity of services provided. Others have chosen to use non-Governmental and private health facilities where they may even pay higher user charges. The introduction of user charges was thought, among other things, to improve services for all users. By far the most important improvement users are seeking for is the ready availability of drugs (Abel-Smith 1992), which is perceived as one of the measures of quality of care. A recent study done by the Dar es Salaam urban Health Project has identified some of the reasons which contributed to deterioration of health care services. These included lack of drugs, low morale of health workers, lack of essential supplies and equipment, lack of training and lack of opportunities for continuing education (Kanji et al 1992).

One question which is yet to be answered is what will be the impact on the of user charges on equity in consuming the necessary and demanded health care and accessibility to health care services in terms of ability to pay for the demanded care. Because of its importance, the Tanzanian Ministry of health has recently developed specific guidelines for exemption of user charges tailored to specific groups of population. The groups which are exempted include, people identified as being poor, pregnant women attending antenatal clinic services, children below the age of five years, patients with chronic conditions (including tuberculosis, AIDS, diabetes mellitus, and cancer). Mechanisms for exemption of the poor and the extent to which the community is being involved have not been clearly spelt out.

While solutions to the exemption mechanisms are being sorted out at various levels, the Government is also very aware of two major weaknesses in its PHC activities. These include lack of community involvement and intersectoral collaboration. The new PHC strategy of 1992 has attempted to provide guidelines for their improvement (MOH, 1992) and at the same time pointing out the need to revitalize existing PHC committees at various levels. In the interim, the Ministry of Health has decentralized the management of funds obtained from user fees to the local decision makers to work out modalities for implementing the Government policy and mechanism for exemption to be determined locally through community involvement.

The extent to which introduction of user charges has affected accessibility to health care services in public, voluntary and private health facilities in Tanzania is not well understood. A study to assess the effect of user charge policy and the other non-price factors on the utilization of health services has recently been carried out in Dar es Salaam, Tanzania by Hussein (1995). The author showed a sharp decline in utilization of outpatient health services in district hospitals run by the government as from the third quarter of the year. This decline was observed immediately after user charges had been introduced in mid July 1994. Apparently there was no similar decline among outpatients attending private hospitals.

The question to be answered is where did the other patients shift to in demand for health care services? Presumably the displaced group represented frivolous demand. If however, the displaced group actually needed health care and it had been denied access as result of introduction of user charges this would raise serious concerns about the whole health care system. It would in fact undermine the fundamental principle that health is a human right and part and parcel of social economic development as stated in the goal for health for all by the year 2000. Although user charges have not yet been introduced at lower levels, Hussein did not study utilization of health services at these levels because of lack of resources. Nevertheless, a study carried out in public peripheral health facilities regarding quality assurance and its effect on utilization as reflected by number contacts per inhabitant per year declined from 6.05 in 1988 to 4.30 in 1992 (Mbeba, 1994). One could speculate that the fundamental problem is the declining quality of care. Primarily, the problem is that drugs are not available in public health facilities and this has seriously hampered the degree of client satisfaction.

This study was carried out to assess equity in accessibility of health care services in public, private not-for-profit and private for profit health facilities in two regions of Tanzania. The term access has been defined as the ability (probability) to receive health services and is influenced by a mix of demand and supply factors. It is not equivalent to utilization or consumption of health services, despite the fact that many authors often use access and utilization interchangeably. For example, two individuals who are identical in every way (preference, income etc.) except health status will consume different amounts of health care, not because of differential access but because of different medical needs. Another example is that two ethnic groups with equal access to formal health services could have markedly different utilization rates due to cultural factors such as reliance on traditional remedies. In practice, access is difficult to measure directly, and utilization rates are used as proxy indicators to show the degree to which different groups have access to health care delivery services.

Objectives

Broad Objective

To determine equity in access to health care services to patients with acute and chronic illness in public, voluntary and private hospitals in Mara and Kilimanjaro regions Tanzania.

Specific objectives

- (1) To describe utilization of health care services and its influencing factors in three categories of hospitals.
- (2) To determine direct cost of care and mode of payment for patients with acute and chronic illness in three categories of hospitals.
- (3) To examine and compare pricing system for referral and non-referral patients with similar medical conditions in three categories of hospitals.
- (4) To evaluate the existing exemption system and how it isolates the real indigent and also its constraints.
- (5) To assess community involvement in determining exemption system in three categories of hospitals.

3. METHODOLOGY

3.1 Design

A cross-sectional survey was carried in 1995 to determine equity in access in public, voluntary and private health care facilities in Kilimanjaro and Mara Regions in Tanzania. Both Kilimanjaro and Mara Regions were purposefully selected out of the 20 regions of mainland Tanzania. The criteria for selection of a region was based on whether it had an adequate number of public, private and voluntary hospitals. The investigators were interested in identifying 3 different types of health facilities which served a reasonably large number of clients who have had experience with cost sharing or paying of user fees. This was considered necessary so as to obtain more informative responses on the issue of equity in accessibility and mechanisms for exemption of the poor.

The criteria for inclusion of a given health facility were:

The health facility must be categorized as a public, voluntary or private hospital.

All the three types of health facilities must share a common catchment population and be accessible by road throughout the year.

They should also provide both in-patient and outpatient services.

Cooperation and interest in using the results should have been expressed by the regional leaders. The results were required in preparation of district health plans.

Using such criteria, six health facilities were identified; two each for public, voluntary and private health facilities. In Kilimanjaro region, such hospitals were identified from three different districts, including Hai, Moshi rural and Moshi Urban districts while in Mara region all the three types of facilities were identified from Tarime district alone.

3.2 Description of study area

The socio-demographic characteristics of the two regions are described below.

Kilimanjaro region had six administrative districts while Mara region had five. In 1993, the total population of the two regions were similar. For Kilimanjaro the total population was estimated to be approximately 1.2 million while in Mara region the population was 1.1 million. The total number of hospitals in Kilimanjaro region was 13, of which 5 were public hospitals, 7 were voluntary hospitals and one was a private hospital. In Mara region, the total number of hospitals was 8, of which 3 were public hospitals, 4 were voluntary hospitals and 1 was a private hospital.

Both infant and child mortality rate figures (IMR & CMR) for Kilimanjaro were almost a half compared with Mara Region. Infant mortality rate in Kilimanjaro region was estimated to be 60 per 1000 live births and underfive mortality was 92 per 1000 children below the age of 5 years in 1994 while in Mara region the corresponding IMR was 113 per 1000 live births and underfive mortality was 191 per 1000 children below the age of 5 years.

Nearly 4-6 times more people had access to water in Kilimanjaro compared with Mara region. Whereas in Kilimanjaro, nearly 18% of the population have access to piped water inside their house or village, and 38% have access to water outside the house or village the comparable figures for Mara region are 3% and 9% respectively (Tanzania Health Statistics Abstract 1994).

Utilization of maternal and child health services was twice as high in Kilimanjaro than Mara region. Nearly 90% of children aged 12-23 months were immunized against the six vaccine preventable diseases in Kilimanjaro region as compared with 48% in Mara region. Similarly, 75% of all births in Kilimanjaro region take place in a health facility as compared with 35% in Mara Region (TDHS 1992).

3.3 Data collection Techniques

Under supervision of one of the co-investigators, six research assistants served as interviewers in each region. Two types questionnaires and focus group discussions (FGDs) were used to collect data. The questionnaires were comprised of a self administered instrument for health workers and structured interviews for patients and the community. Each of these instruments had been pretested in Bagamoyo district and a Swahili translation was used in the field.

In each of the selected health facility, exit interviews were administered to the first 100 outpatients or inpatients who had been discharged. Patients were explained the objectives of the study and were asked whether they would be willing to participate by responding to the questionnaire. Subjects who consented were interviewed before leaving the hospital. Their diagnoses were grouped into two major categories either acute or chronic illness. A condition was labelled as acute if the diagnosis was either malaria, diarrhoea, injury, or cough of less than three weeks. Chronic illness was based on diagnosis of either cardiovascular disorder, diabetes mellitus or tuberculosis. Each patient's diagnosis was identified from his/her prescription form.

Using a structured-interview questionnaire, each subject was asked to provide information about his/her socio-demographic characteristics. This included patient's age, sex, marital status, education level, occupation and income. Geographic accessibility was determined from distance and time taken to get to the hospital. Clients were also asked what is the distance between the facility to their home and how many hours they took to get to the health facility. Means of travel to various health facilities and reasons for choice of the respective health were also enquired.

Perceived client satisfaction was assessed by asking about their perceived waiting time, consultation time, whether he/she was told diagnosis, treatment plan and how to use the prescribed drugs. Patients were also asked whether their prescribed drugs were available in the health facility? The number and type of prescribed drugs (items) on each prescription form was recorded so as to compare the average for public, voluntary and private health

facilities.

On the issue of user charge, patients were asked how much was the cost of treatment and whether they thought the user charge was cheap, average or expensive and mode of payment of user charge. The issue was to find those who paid out of pocket, or through their employer. Sources of user charges were also determined. Equity in treatment was assessed by asking clients if they thought they got equal treatment compared with other individuals with a similar condition.

On exemption, subjects were asked whether they wanted exemption; if they had been ever been exempted before and if they had ever been refused treatment because they could not afford to pay their user charge.

Following the health facility survey, community and health worker interviews were also carried to supplement for any additional information which the investigators thought would be necessary to answer all the above objectives.

3.4 Focus Group Discussions (FGDS)

FGDs were conducted with administrators and health workers mainly social workers who were specifically involved with exemption of patient who could not pay user fees especially in public hospitals. The main themes were to identify different exemption criteria used by specific hospitals and to find their experience and constraint in using the specific type of exemption. FGDs were also supplemented with semi-structured interviews to health workers and consumers from the community.

Health Worker interviews:

All health workers attending patients at the outpatient department of each hospital were studied through a self administered questionnaire. Each of them was asked about mechanisms of exemption for user charges and pricing system for referral patients.

Community Interviews:

This was done to the population which had equal geographical accessibility to all the selected health facilities (public, voluntary and private).

In each region, a list of all villages situated between the 3 types of hospitals was obtained from district maternal and child health coordinators and district cold chain operators. A total of 5 villages were randomly selected and from each village at least 4 ten cell leaders were also randomly selected from a list of all ten cell leaders provided by the village chairman. All households under the selected ten cell leader were visited so as to interview at least one adult member of the family per household. A total of 200 persons were expected to be interviewed in each area.

3.5 Data Analysis

The questionnaires were coded, and entered using Epi-Info software and data were then checked for inconsistencies. Two by two contingency tables were prepared based on the specific objectives and significant associations were measured using Mantel Haenszel Chi-square test and a p-value of <0.05 . Differences between two proportions and their 95% confidence intervals were also determined where appropriate. The dependent variables were: accessibility (by distance, and time), means of travel and reasons for choice of health facility by type of illness, perceived client satisfaction (based perceived waiting time, consultation time, whether he/she was told diagnosis, treatment plan, how to use the prescribed drugs and what to watch out in case of side effects; quality of care (based on number of prescribed drugs and number of prescribed drugs (items) per prescription form. The average number of drugs and standard deviation for public, voluntary and private health facilities was computed. Cost of treatment was compared in the 3 different types of health facilities also by type of illness. The median and range for those who reported who said that their user charge was cheap, average or expensive was compared by type of facility. Equity in treatment was compared among acute versus chronic illness patients, also by age and sex categories. The question of whether they wanted exemption was analyzed by type of illness and facility. Sources of user charges were determined by type of health facility. Similarly, the percentage of patients who were refused treatment because they could not afford to pay their user charge was analyzed to see if there was a difference by type of facility. The independent variables included: type of health facility, age, sex, marital status. Stratified analysis was also done to control for potential confounders.

NB: The fact that the sample was purposeful selected makes the study finding restricted to the two selected regions and the value of statistical test less important. However although not randomly selected the variables which have showed statistical significant variation are important to mention and would have been important to look at when the need to do a representative study arises.

4. RESULTS

4.1 PATIENT PERSPECTIVE

4.1.1 UTILIZATION OF HEALTH SERVICES

Socioeconomic and demographic profile

A total of 609 patients were interviewed, 303 (49.8%) were male and 306 (50.2%) were female. Of these patients, 194 (31.9%) were from public health facilities, 263 (43.2%) from voluntary health facilities and 152 (25%) were from private health facilities.

Table 1 provides the socio-demographic profile of these patients; 39% were aged of less than 30 years and 61% were 30 years or older. Significantly more younger patients attended private health facilities compared with voluntary or public health facilities where the clients were relatively much older ($P < 0.05$).

Seventy percent (70.0%) of the patients were married, 24.4% were single and 5.6% were either cohabiting, divorced or widowed. Among the married women, significantly larger percentage of them attended public and voluntary health facilities compared with private. The percentages were 71%, 73% and 64% respectively. Three quarters of the study sample had completed 7 years of education or more.

Types of illness

Table 2 shows the relationship between type of illness by sex and by type of health facility attended. On this aspect, patients cards and prescription forms were checked to find out whether they were suffering from an acute or chronic illness. Eighty percent (484/608) had an acute illness and 20% had chronic illness. The peak age for acute illness patients was in the 20-39 years age group while for chronic illness patients it was in the 40-59 years age group (Table not shown). Female patients with acute illness were significantly more than male patients, 84.3% and 74.8% respectively and the difference, 9.8% (95% confidence interval (CI) 3.4%, 16.2%; $P < 0.05$, $df = 1$) was statistically significant (Table 2).

In both sexes, a significantly larger percentage of patients with acute conditions were attended in private health facilities than voluntary or public health facilities ($P < 0.05$). Type of illness was significantly associated with patient's age and choice of health facility. Similarly in both sexes significantly more subjects with chronic illnesses got treatment from voluntary health facilities than from public or private health facilities. In fact nearly 70% of patients with chronic illness were treated at voluntary health facilities while 23.4% were treated at public health facilities and 5.6% in private health facilities ($P < 0.05$) (Table 2).

Table 1. Socio-demographic characteristics of patients attending treatment in public, voluntary and private health facilities in Tanzania

| Characteristic | Type of Health Facility | | | | | N = 609 Total (%) |
|---------------------------|---------------------------------------|--|--|-----|---------|----------------------|
| | <u>Public</u> N= 194 Number (%) | <u>Voluntary</u> N= 263 Number (%) | <u>Private</u> N= 152 Number (%) | | | |
| Age | | | | | | |
| <30 years | 75 (38.7) | 74 (28.1) | 88 (57.9) | 237 | (38.9) | |
| ≥30 years | 119 (61.3) | 189 (71.9) | 64 (42.1) | 372 | (61.1) | |
| All | 194 (100.0) | 263 (100.0) | 152 (100.0) | 609 | (100.0) | |
| Sex | | | | | | |
| Male | 98 (50.5) | 135 (51.3) | 70 (46.1) | 303 | (49.8) | |
| Female | 96 (49.5) | 128 (48.7) | 82 (53.9) | 306 | (50.2) | |
| Marital Status | | | | | | |
| Married | 138 (71.1) | 192 (73.0) | 97 (63.8) | 425 | (70.0) | |
| Single | 49 (25.3) | 51 (19.4) | 48 (31.6) | 148 | (24.4) | |
| Widowed | 7 (3.6) | 16 (6.1) | 1 (0.7) | 24 | (4.0) | |
| Cohabiting | 0 (0.0) | 1 (0.4) | 6 (3.9) | 7 | (1.2) | |
| Divorced | 0 (0.0) | 3 (1.1) | 0 (0.0) | 3 | (0.5) | |
| Level of Education | | | | | | |
| <7 years | 55 (28.4) | 45 (17.1) | 48 (31.5) | 148 | (24.3) | |
| ≥7 years | 139 (71.6) | 218 (82.9) | 104 (68.5) | 461 | (75.7) | |

Table 2. Type of illness by sex and type of health facility

| Type of illness | <u>Male</u> | | | | <u>Female</u> | | | |
|-----------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|
| | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
| Acute illness | 76 (77.6) | 83 (61.9) | 67 (95.7) | 226 (74.8) | 89 (92.7) | 91 (71.1) | 78 (95.1) | 258 (84.3) |
| Chronic Illness | 22 (22.4) | 51 (38.1) | 3 (4.3) | 76 (25.2) | 7 (7.3) | 37 (28.9) | 4 (4.9) | 48 (15.7) |
| All | 98 (100.0) | 134 (100.0) | 70 (100.0) | 302 (100.0) | 96 (100.0) | 128 (100.0) | 82 (100.0) | 306 (100.0) |

 $\chi^2 = 28.42$ $p < 0.0000067$ $df=2$
 $\chi^2 = 29.3$ $p < 0.00001$ $df 2$

Accessibility to health facilities (distance).

Out of 587 respondents, nearly two-thirds (65%) lived within a distance of 5km from their nearest health facility, 90% within 10km and nearly 10% lived more than 10 km away from a health facility (Table 3). Accessibility (distance) in relation to type of illness and type of health facility is given in Table 4. Both distance and type of illness were significant factors influencing choice of health facility from which to seek treatment ($p < 0.05$). Among acute illness patients living within a distance of 5 km from a health facility, were more likely to seek treatment from private health facilities than voluntary or public health facilities, 83%, 58% and 64% respectively. Similarly, among chronic illness patients, they chose to seek treatment from voluntary health facilities (60%) than private (43%) or public health facility (41%) and the difference between the three types of facilities was statistically significant ($p < 0.05$).

Table 3. Distance to the nearest Health facility

| Distance (Km) | Number | Percent |
|---------------|--------|---------|
| 0- 4.99 | 380 | 64.7 |
| 5 - 9.99 | 148 | 25.2 |
| 10-19.9 | 43 | 7.3 |
| 20-39.9 | 9 | 1.5 |
| 40-59.9 | 1 | 0.2 |
| ≥ 60-185 | 6 | 1.0 |
| All | 587 | 100.0 |

Analysis of accessibility (distance) by sex and type of health facility shows that there was equitable access to health facilities by both male and female patients (Table 5). If one disregards the type of facility, data shows that in both male and female patients, 65% lived within a distance of 5 kilometers from a health facility and 90% within 10 kilometers.

Although among patients living within a distance of 5km from a health facility the percentage of female patients (84.7%) with accessibility to private health facilities appeared to be larger than among male patients (77.1%), but the difference (7.6%) was not significant (Table 5). This suggests that in both sexes there was equity in accessibility to private health facilities based on distance travelled.

Table 4. Accessibility (distance) in relation to type of illness and type of health facility in Mara and Kilimanjaro Regions

| Distance km | <u>Acute illness</u> | | | | <u>Chronic illness</u> | | | | | | | | | | | |
|----------------|----------------------|----------|-------------------------|----------|------------------------|----------|---------------------|----------|----------------------|----------|-------------------------|----------|-----------------------|----------|---------------------|----------|
| | <u>Public</u> No. | <u>%</u> | <u>Voluntary</u> No. | <u>%</u> | <u>Private</u> No. | <u>%</u> | <u>Total</u> No. | <u>%</u> | <u>Public</u> No. | <u>%</u> | <u>Voluntary</u> No. | <u>%</u> | <u>Private</u> No. | <u>%</u> | <u>Total</u> No. | <u>%</u> |
| <5 | 103 | 63.6 | 99 | 58.2 | 112 | 83.0 | 314 | 67.2 | 12 | 41.4 | 50 | 59.5 | 3 | 42.9 | 65 | 54.2 |
| 5-9 | 41 | 25.3 | 45 | 26.5 | 21 | 15.6 | 107 | 22.9 | 8 | 27.6 | 30 | 35.7 | 3 | 42.9 | 41 | 34.2 |
| 10+ | 18 | 11.1 | 26 | 15.3 | 2 | 1.4 | 46 | 9.9 | 9 | 31.0 | 4 | 4.8 | 1 | 14.2 | 14 | 11.6 |
| All | 162 | 100.0 | 170 | 100.0 | 135 | 100.0 | 467 | 100.0 | 29 | 100.0 | 84 | 100.0 | 7 | 100.0 | 120 | 100.0 |

Table 5. Accessibility (Distance) by sex and type of health facility in Mara and Kilimanjaro Regions.

| Distance (km) | Male | | | | Female | | | |
|------------------|-------------------------|----------------------------|--------------------------|------------------------|-------------------------|----------------------------|--------------------------|------------------------|
| | Public Number (%) | Voluntary Number (%) | Private Number (%) | Total Number (%) | Public Number (%) | Voluntary Number (%) | Private Number (%) | Total Number (%) |
| <5 | 55 (56.1) | 85 (64.4) | 54 (77.1) | 194 (64.7) | 60 (64.5) | 65 (52.8) | 61 (84.7) | 186 (64.6) |
| 5-9 | 25 (25.5) | 35 (26.5) | 13 (18.6) | 73 (24.3) | 24 (25.8) | 40 (32.5) | 11 (15.3) | 75 (26.0) |
| 10+ | 18 (18.4) | 12 (9.1) | 3 (4.3) | 33 (24.3) | 9 (9.7) | 18 (14.6) | 0 (0) | 27 (9.7) |
| All | 98 (100.0) | 132 (100.0) | 70 (100.0) | 300 (100.0) | 93 (100.0) | 123 (100.0) | 72 (100.0) | 288 (100.0) |

Accessibility to health facilities based on time

Nearly eight nine percent (89.2%) of patients said they had got to the hospital within an hour and another 10% within 1-3 hours (Table 6). Although 86.0% of the patients who went to private health facilities said they got there in less than half an hour, the proportions which got to voluntary (45%) and public health facilities (65.8%) within that time were relatively smaller.

Table 6. Patient's travel time to public, voluntary and private health facilities in Tanzania

| Travel time (mins) | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|--------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | % |
| 1-30 | 125 | (65.8) | 118 | (45.2) | 129 | (86.0) | 372 | (61.9) |
| 31-60 | 55 | (28.9) | 92 | (35.2) | 17 | (11.3) | 164 | (27.3) |
| 60+ | 10 | (5.3) | 51 | (19.5) | 4 | (2.7) | 65 | (10.8) |
| All | 190 | (100.0) | 261 | (100.0) | 150 | (100.0) | 601 | (100.0) |

Means of travel to health facilities

In general, means of travel to various health facilities was equitable to both male and female patients and by type of illness (see Table 7, 8 and 9). Half the patients walked to the nearest health facility, 22% used public transportation, 16% hired a bicycle or a vehicle and 8% used a privately owned vehicle (Table 7).

Analysis by type of health facility showed that patients attending voluntary health facilities compared with public and private health facilities were more likely to walk, 65.6%, 38.7% and 40.8% respectively. Similarly a relatively larger proportion of patients who attended treatment in private than public or voluntary health facilities were more likely to hire or use their own vehicle (Table 7). Means of travel to various types of health facilities by sex category is given in Table 8. Means of travel to health facilities by both male and female patients were equitable. Similarly among subjects with acute and chronic illnesses, a relatively larger percentage of patients reported that they walked to voluntary health facilities than private or public facilities, and this observation also applies to both male and female patients. On average there was equity, among male and female patients, in percentage distribution of subjects (roughly 25%) who reported that they used either a rented or privately owned vehicle to attend treatment at private health facilities.

Examining means of travel to various health facilities by type of illness, data showed that three times as many patients with acute compared with chronic illness walked to private

health facilities. As for public health facilities, twice as many patients with acute compared to chronic illness patients walked. It was also noted that percentage of patients who walked to voluntary health facilities, for both acute and chronic illnesses was significantly much larger than those who attended treatment in public or private health facilities (Table 9). However, in both acute and chronic illness relatively more patients attending public health facilities used public transport than voluntary and private hospitals.

Table 7. Means of travel to public, voluntary and private health facilities in Mara and Kilimanjaro Regions.

| Means of travel | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|-------------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Walking | 75 | (38.7) | 170 | (65.6) | 62 | (40.8) | 307 | (53.9) |
| Public Transport | 79 | (40.7) | 48 | (18.5) | 33 | (21.7) | 127 | (22.2) |
| Hired bicycle | 21 | (10.8) | 30 | (11.6) | 15 | (9.9) | 66 | (11.6) |
| Own Vehicle | 14 | (7.2) | 7 | (2.7) | 22 | (14.5) | 43 | (7.5) |
| Hired Vehicle | 3 | (1.5) | 4 | (1.5) | 18 | (11.8) | 25 | (4.4) |
| Vehicle from work place | 2 | (1.0) | 0 | (0.0) | 2 | (1.3) | 2 | (0.4) |
| All | 194 | (100.0) | 259 | (100.0) | 152 | (100.0) | 570 | (100.0) |

Table 8. Means of travel to various health facilities by sex category in Mara and Kilimanjaro Regions

| Means of Travel to health facilities | Male | | | Female | | | Total | | | | | | | | | |
|--------------------------------------|------|-------|-----|--------|-----|-------|-------|------|-----|-------|-----|-------|----|-------|-----|------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | | | | | | |
| Walking | 37 | 37.8 | 91 | 68.4 | 28 | 40.0 | 156 | 51.8 | 38 | 39.6 | 80 | 63.0 | 34 | 41.5 | 152 | 49.8 |
| Public Transport | 39 | 39.8 | 23 | 17.3 | 19 | 27.1 | 81 | 26.9 | 40 | 41.7 | 25 | 19.6 | 14 | 17.1 | 79 | 25.9 |
| Hired Bicycle | 12 | 12.2 | 11 | 8.3 | 4 | 5.7 | 27 | 9.0 | 9 | 9.4 | 19 | 15.0 | 11 | 13.4 | 39 | 12.8 |
| Own Vehicle | 8 | 8.2 | 6 | 4.5 | 10 | 14.3 | 24 | 8.0 | 6 | 6.2 | 1 | 0.8 | 12 | 14.6 | 19 | 6.2 |
| Hired Vehicle | 0 | 0 | 2 | 1.5 | 8 | 11.4 | 10 | 3.3 | 3 | 3.1 | 2 | 1.6 | 10 | 12.2 | 15 | 4.9 |
| Vehicle from workplace | 2 | 2.0 | 0 | 0 | 1 | 1.4 | 3 | 1.0 | 0 | 0 | 0 | 0 | 1 | 1.2 | 1 | 0.3 |
| All | 98 | 100.0 | 133 | 100.0 | 70 | 100.0 | 301 | 100 | 96 | 100.0 | 127 | 100.0 | 82 | 100.0 | 305 | 100 |

Table 9. Means of travel to various health facilities by type of illness, Tanzania 1996.

| Means of travel to Health Facility | <u>Acute illness</u> | | | | <u>Chronic illness</u> | | | | | | | | | | | |
|------------------------------------|----------------------|-------------------|----------------|--------------|------------------------|------------------|----------------|--------------|----|-------|----|-------|---|-------|-----|-------|
| | <u>Public</u> | <u>Voluntary.</u> | <u>Private</u> | <u>Total</u> | <u>Public</u> | <u>Voluntary</u> | <u>Private</u> | <u>Total</u> | | | | | | | | |
| | No. | % | No. | % | No. | % | No. | % | | | | | | | | |
| Walking | 69 | 41.8 | 120 | 69.8 | 61 | 42.1 | 250 | 51.9 | 6 | 20.7 | 50 | 57.5 | 1 | 14.3 | 57 | 46.3 |
| Public Transport | 66 | 40.0 | 26 | 15.1 | 31 | 21.4 | 122 | 25.5 | 13 | 44.8 | 22 | 25.3 | 2 | 28.6 | 37 | 30.1 |
| Hired Bicycle | 15 | 9.1 | 20 | 11.6 | 13 | 8.9 | 48 | 10.0 | 6 | 20.7 | 10 | 11.5 | 2 | 28.6 | 18 | 14.6 |
| Own Vehicle | 10 | 6.1 | 2 | 1.2 | 21 | 14.5 | 33 | 6.8 | 4 | 13.8 | 5 | 5.7 | 1 | 14.3 | 10 | 8.1 |
| Hired Vehicle | 3 | 1.8 | 4 | 2.3 | 17 | 11.7 | 24 | 5.0 | 0 | 0.0 | 0 | 0 | 1 | 14.3 | 1 | 0.8 |
| Vehicle from workshop | 2 | 1.2 | 0 | 0 | 2 | 1.4 | 4 | 0.8 | 0 | 0.0 | 0 | 0 | 0 | 0.0 | 0 | 0.0 |
| All | 165 | 100.0 | 172 | 100.0 | 145 | 100.0 | 482 | 100 | 29 | 100.0 | 87 | 100.0 | 7 | 100.0 | 123 | 100.0 |

Reasons for choice of type of health facility

Patients were asked why they chose to get health care services from the health facility they attended. For all patients their commonest reason given was short distance (61%), drugs were available (58%), health workers were polite (37%) and short waiting time (35.0%) (see table 10). Nearly a quarter said it was relatively cheap. For private and voluntary health facilities drug availability was the commonest reason for choosing the facility, 83.6% and 79.8% respectively. The second reason given for choice of private health facilities was that waiting time was short (44.%) while in voluntary health facilities it was short distance (76.8%).

For public health facility users, the commonest reason for choosing the facility was short distance (59.3%) followed by cost of services were cheap (46.4%).

Half the respondents reported that health workers were more polite in voluntary health facilities as compared to a quarter each in public and private health facilities (Table 10).

Table 10. Reasons for choice of type of health facility

| | <u>Public</u> N=194 (%) | <u>Voluntary</u> N=263 (%) | <u>Private</u> N=152 (%) | <u>Total</u> N=609 (%) |
|------------------------|-------------------------------|----------------------------------|--------------------------------|------------------------------|
| Low cost | 46.4 | 18.3 | 3.3 | 23.5 |
| Short distance | 59.3 | 76.8 | 37.5 | 61.4 |
| Short Waiting time | 20.1 | 40.3 | 44.7 | 35.0 |
| Drug availability | 6.7 | 79.8 | 83.6 | 57.5 |
| Health workers Polite | 24.2 | 51.7 | 26.3 | 36.6 |
| Relative is a worker | 0 | 7.6 | 2.6 | 4.0 |
| Referred | 1.0 | 2.2 | 1.3 | 1.6 |
| More technical service | 1.0 | 1.1 | 1.3 | 1.1 |
| Govt. hospital | 2.1 | 0.4 | 0.0 | 0.8 |

Client satisfaction

Client satisfaction was assessed by analyzing availability of prescribed drugs in the health facility, waiting time, provider-client interaction, and information sharing. Although, most patients were satisfied with the above indicators, there were significant variations, between the 3 different types of facilities also, by type of illness.

Availability of Drugs

Out of 603 patients interviewed, 25% (153/603) reported that their prescribed drugs were not available in the health facility while 75% (450/603) said they were available (Table 11). A significantly larger percentage of patients with acute compared with chronic illness could not get their prescribed drugs. The percentages were 29.2% and 10.6% respectively and the difference 18.6% (95% CI= 11.8%, 25.4% M-H Chi-square =17.9 p<0.05 df=1) was statistically significant.

Analyzing drug availability by type of health facility, data showed nearly 80% of the patients with acute illness in public health facilities could not get their prescribed drugs available compared with 4.0% and 2% of the patients attending voluntary and private health facilities respectively (see table 11). As for patients with chronic illness, none of them missed their drugs in private health facilities. In voluntary and in public health facilities, 2% and 38% of the subjects could not get their prescribed drugs.

Number of drugs prescribed

Table 12 shows the number of drugs per prescription by type of illness in public, voluntary and private health facilities in Mara and Kilimanjaro regions. Nearly 70% of all patients were given prescription of 3-5 drugs. The average number of drugs per prescription in all the 3 types of facilities was 2.89 ± 0.83 . Average number of drugs per prescription was significantly different when one compares the 3 different types of facilities. The average number of drugs prescribed was much higher in private health facilities than voluntary or public health facilities. The average number of prescribed drugs (\pm standard deviation) was 3.4 ± 0.9 drugs in private health facilities, 2.8 ± 0.8 drugs in voluntary and 2.7 ± 0.7 drugs in public health facilities.

Rational prescribing

Rational prescribing was practiced best in public health facilities for both acute and chronic illness and worst in private followed by voluntary health facilities.

Although the policy for rational prescribing in Tanzania recommends one or two drugs per illness, irrational prescribing of multiple drugs was very common. Nearly three out of four patients (73.6%) with acute illness as compared with half the patients (51.7%) with chronic illness were given prescriptions of 3-5 drugs (table 12). Among acute illness patients nearly 90% of patients in private health facilities compared with 72% in voluntary and 62% in public health facilities were given 3-5 drugs. As for chronic illness patients, the figures were 72%, 51% and 48% for private, voluntary and public health facilities respectively.

Table 11. Availability of prescribed drugs for acute and chronic illnesses in public, voluntary and private health facilities in Mara and Kilimanjaro Regions

| Prescribed drugs available in health facility | Acute illness | | | Total No (%) | Chronic illness | | | Total No (%) |
|---|---------------|------------------|----------------|--------------|-----------------|------------------|----------------|--------------|
| | Public No (%) | Voluntary No (%) | Private No (%) | | Public No (%) | Voluntary No (%) | Private No (%) | |
| Yes | 33(20.2) | 167(96.0) | 140(97.9) | 340(70.8) | 18(62.1) | 85(97.7) | 7(100.0) | 110 (89.4) |
| No | 130(79.8) | 7 (4.0) | 3 (2.1) | 140(29.2) | 11(37.9) | 2 (2.3) | 0 (0.0) | 13 (10.6) |
| Total | 163(100.0) | 174(100.0) | 143(100.0) | 480(100.0) | 29(100.0) | 87(100.0) | 7(100.0) | 123(100.0) |

M-H $\chi^2 = 305.87$ $p < 0.000001$ $df=1$

Table 12. Number of drugs (percent) per prescription form by type of illness and type of facility.

| Number of Drugs per Prescription form | <u>Acute illness</u> | | | | <u>Chronic illness</u> | | | |
|--|-------------------------------------|--|--------------------------------------|------------------------------------|------------------------------------|---------------------------------------|------------------------------------|------------------------------------|
| | <u>Public</u> N=161 (% Total) | <u>Voluntary</u> N=171 (% Total) | <u>Private</u> N=143 (% Total) | <u>Total</u> N=475 (% Total) | <u>Public</u> N=29 (% Total) | <u>Voluntary</u> N=84 (% Total) | <u>Private</u> N=7 (% Total) | <u>Total</u> N=120 (% Total) |
| 1 | (2.5) | (2.9) | (2.1) | (2.5) | (3.4) | (9.5) | (0) | (7.5) |
| 2 | (35.4) | (19.2) | (9.1) | (23.8) | (48.3) | (39.3) | (28.6) | (40.8) |
| 3 | (49.7) | (56.1) | (46.2) | (50.9) | (44.8) | (35.7) | (14.3) | (36.7) |
| 4 | (12.4) | (15.2) | (35.0) | (20.2) | (3.4) | (15.5) | (42.9) | (14.2) |
| 5 | (0.0) | (0.6) | (7.7) | (2.5) | (0) | (0) | (14.3) | (0.8) |

Perceived Waiting time

Assessment of client satisfaction in public, voluntary and private health facilities according to perceived waiting time is given in table 13. Overall waiting time was significantly different in the three types of health facilities ($p < 0.001$). The average waiting time in public 19.3 ± 25.2 minutes, 17.4 ± 12 minutes in voluntary and 10.5 ± 15.8 minutes in private health facilities. Waiting time in public health facilities was almost twice that of private health facilities. Nearly 70% of the clients reported that the waiting time was short (≤ 15 min) while a quarter (24%) reported it was normal (16-30 min) and 5% thought it was long (> 30 min). Comparing different types of health facilities, clients perceived waiting time was shortest in private health facilities (89%) followed by public (71%) and voluntary (60%).

Table 13. Perceived waiting time in Public, Private and Voluntary health facilities in Mara and Kilimanjaro Regions

| Waiting Time (Minutes) | <u>Type of Health Facility</u> | | | | | | |
|------------------------|--------------------------------|---------|------------------|---------|----------------|---------|--------------|
| | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> |
| | Number | (%) | Number | (%) | Number | (%) | Number (%) |
| 1-15 | 137 | (71.0) | 154 | (60.1) | 132 | (89.2) | 423(70.9) |
| 16-30 | 43 | (22.3) | 90 | (35.2) | 11 | (7.4) | 144(24.1) |
| >30 | 13 | (6.7) | 12 | (4.7) | 5 | (3.4) | 30(5.0) |
| All | 193 | (100.0) | 256 | (100.0) | 148 | (100.0) | 597(100.0) |

Mean(\pm SD) 19.3 \pm 25.2 17.4 \pm 12.0 10.5 \pm 15.8

M-H $\chi^2 = 43.42$ $p < .0001$, $df = 4$

Consultation time

Patients were asked whether they had adequate consultation time to enable them to explain their complaints well. Overall 97.5% of the subjects responded that they had been given adequate time (Table 14.) 100% of the patients interviewed in private health facilities responded that their consultation time was adequate as compared with 98% in voluntary and 95% in public health facilities respectively, however the difference between facilities was not statistically significant.

Table 14. Client satisfaction in consultation time, diagnosis, health providers politeness by type of health facility

| Client satisfied | Type of Facility | Adequate time for Consultation | Given Diagnosis | Health provider's politeness |
|-----------------------|------------------|--------------------------------|-----------------|------------------------------|
| | | Number(%) | Number(%) | Number(%) |
| Yes | Public | 184 (95.3) | 174 (91.1) | 177 (91.7) |
| | Voluntary | 253 (97.7) | 235 (91.1) | 251 (96.5) |
| | Private | 150 (100.0) | 137 (90.1) | 152 (100.0) |
| No | Public | 9 (4.7) | 17 (8.9) | 16 (8.3) |
| | Voluntary | 6 (2.3) | 23 (8.9) | 9 (3.5) |
| | Private | 0 (0.0) | 15 (9.9) | 0 (0.0) |
| Total No. of subjects | | 602 | 601 | 605 |

Patient given the diagnosis

Patients were whether they were told their diagnosis, more than 90% responded affirmatively and there were no differences between the 3 types of health facilities (Table 14). When they were asked if they thought that the prescriber was caring, polite and understanding and nearly 95% responded positively (Table 14). The percentages for public, voluntary and private health facilities were 91.7%, 96.5% and 100% respectively.

Information on case management plan

The majority of study subjects (91.9%) reported that they were explained how they were going to be treated until they get cured. In all the 3 types of health facilities, 98.% of chronic patients compared with 90.% of acute patients were explained of their management plan (Table 15). The difference between acute and chronic illness patients, 8% (95% CI = 5%, 12%) was statistically significant. However when one compares the 3 different types of health facilities the difference was not significant (see table 15).

Adequate Treatment Instructions

Nearly 90% of patients were satisfied that they received adequate treatment instructions. The percentage of clients who got inadequate instructions was relatively larger in private than voluntary and public health facilities; 17%, 7% and 10% respectively (Table 16). The difference between the facilities was statistically significant (M-H Chi square 10.84; p-value <0.05; df =2).

Adequate instructions about side effects

Nearly sixty percent of clients received adequate instructions about possible drug side effects that could arise as they took their prescribed medications. Although it appears that instructions were best explained in public health facilities (66%) compared with voluntary (61%) and private health facilities (54%). The difference between the 3 different types of health facilities was not significant (Table 16).

Table 15. Number of patients (percentage) who were told their case management plan by type of illness and type of health facility.

| Told Management Plan | Acute illness | | | | Chronic illness | | | |
|----------------------|---------------|-------------|-------------|-------------|-----------------|------------|------------|-------------|
| | Public | Voluntary | Private | Total | Public | Voluntary | Private | Total |
| | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) |
| Yes | 146 (89.0) | 156 (90.7) | 132 (91.0) | 434 (90.2) | 29 (100.0) | 85 (92.7) | 7 (100) | 121 (98.4) |
| No | 18 (11.0) | 16 (9.3) | 13 (9.0) | 47 (9.8) | 0 (0.0) | 2 (2.3) | 0 (0.0) | 2 (1.6) |
| All | 164 (100.0) | 172 (100.0) | 145 (100.0) | 481 (100.0) | 29 (100.0) | 87 (100.0) | 7 (100.0) | 123 (100.0) |

M-H $\chi^2 = 0.42$ p=0.81

M-H $\chi^2 = 0.84$ P value = 0.65 df = 2

Table 16. Number (percentage of patients who were satisfied with the explanations for treatment, use of drugs and their side effects by type of facility

| Client satisfied | Type of Facility | Treatment explained | Use of drugs explained | Side effects explained |
|-----------------------|------------------|---------------------|------------------------|------------------------|
| | | Number(%) | Number(%) | Number(%) |
| Yes | Public | 174 (90.2) | 176 (91.7) | 126 (65.6) |
| | Voluntary | 243 (93.1) | 246 (94.6) | 158 (60.8) |
| | Private | 126 (82.9) | 144 (94.7) | 81 (54.2) |
| No | Public | 19 (9.8) | 16 (8.3) | 66 (34.4) |
| | Voluntary | 18 (6.9) | 14 (5.4) | 102 (39.2) |
| | Private | 26 (17.1) | 8 (5.3) | 69 (46.0) |
| Total No. of subjects | | 606 | 604 | 602 |

Adequate instructions on how to use the prescribed drugs

The majority of patients (93.7%) received adequate instructions on how to use their prescribed drugs and there was no difference when one compares the 3 types of health facilities (Table 16).

Table 17. Client satisfaction among patients who attended treatment for the first time by type of health facility

| Treatment Satisfaction | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
|------------------------|-----------------------------|--------------------------------|------------------------------|----------------------------|
| Yes | 40 (63.5) | 69 (86.3) | 68 (93.2) | 177 (81.9) |
| No | 23 (36.5) | 11 (13.8) | 5 (6.8) | 39 (18.1) |
| All | 63 (100.0) | 80 (100.0) | 73 (100.0) | 216 (100.0) |

M-H $\chi^2 = 21.70$ P= 0.00001 df = 2.

Satisfaction with treatment given

Among 216 patients who attended treatment for the first time in all the 3 types of health facilities, 82% responded that they were satisfied with the prescribed treatment and 18% were not. The degree client satisfaction was significantly higher in private health facilities (93.2%) compared with voluntary (86.3%) and public health facilities (63.5%); (M-H $\chi^2 = 21.7$, p value <0.05, df=2). (Table 17).

Table 18. Number (percentages) of patients with acute and chronic conditions who were told to come back by types of health facility

| | <u>Acute Illness</u> | | | | <u>Chronic Illness</u> | | | | |
|------------------------|-----------------------------------|----------------|---------------|-----------------------------------|------------------------|---------------|-----------------------------------|----------------|---------------|
| | <u>Public</u> <u>Voluntary</u> | <u>Private</u> | <u>Total</u> | <u>Public</u> <u>Voluntary</u> | <u>Private</u> | <u>Total</u> | <u>Public</u> <u>Voluntary</u> | <u>Private</u> | <u>Total</u> |
| Appoint- ment given | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) | Number (%) |
| Yes | 88 (54.3) | 100 (59.2) | 102 (71.3) | 290 (61.2) | 25 (89.3) | 69 (84.1) | 5 (71.4) | 99 (84.6) | |
| No | 74 (45.7) | 69 (40.8) | 41 (28.7) | 184 (38.8) | 3 (10.7) | 13 (15.9) | 2 (28.6) | 18 (15.4) | |
| All | 162 | 169 | 143 | 474 | 28 | 82 | 7 | 117 | |

M-H $\chi^2 = 9.7$ P=0.007 df=2M-H $\chi^2 = 1.42$ P= 0.49 df = 2

A date for the next appointment given

Nearly two-thirds of all patients were given appointments for their next visit.

Patients with acute conditions were more likely to be given a date for their next appointment in private than in voluntary and public health facilities, 71%, 59% and 54% respectively (M-H Chi square = 9.7, p-value <0.05, df =2) (Table 18). As for chronic conditions, it appears more patients in public health facilities compared with voluntary and private facilities were given appointments for their next visit but proportions were not statistically significant if you compare the 3 types of health facilities (p=0.49) (Table 18).

Self Referral

Patients were asked whether they had recently attended any other health facility before coming to the present health facility for the same illness. Of 601 patients interviewed, 21% (129/601) they were self referrals from at least one of the three types of health facilities (Table 19). Of those seen in private health facilities, 71% (17/24) had shifted from public health facilities and of patients seen in voluntary health facilities 60% (47/78) had also shifted from public health facilities. Only 22% (6/27) of subjects in public health facilities had shifted from another public health facility (Table 19). Similarly, of 27 patients seen in public health facilities, two thirds (18/27) had shifted from private presumably because they could not afford to pay high user charges (median Tshs.9,500/=). Of those 18 patients, nearly 30% (15/18) had acute conditions and 89% (16/18) had completed less than 7 years of education.

Table 19. Distribution of self referred patients (%) by type of health facility

| Self Referred from | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
|--------------------|-----------------------------|--------------------------------|------------------------------|----------------------------|
| Public | 6 (22.2) | 47 (60.3) | 17 (70.8) | 70 (54.3) |
| Voluntary | 3 (11.1) | 18 (23.0) | 0 (0.0) | 21 (16.3) |
| Parastatals | 0 (0.0) | 2 (2.6) | 2 (8.3) | 4 (3.1) |
| Private | 18 (66.7) | 11 (14.1) | 5 (20.8) | 34 (26.3) |
| Total | 27 (100.0) | 78 (100.0) | 24 (100.0) | 129 (100.0) |

4.1.2 USER CHARGE AND MODE OF PAYMENT

Charge of health services.

Patients were asked whether they felt that the user charge was cheap, average or expensive. Two-thirds of all patients (68.6%) felt it was average and 12% said it was expensive. Sixty percent (60%) of subjects who said it was expensive had come to seek treatment from voluntary health facilities. The median payment for subjects who said it was relatively cheap, average or expensive by type of health facility is given in Table 20. In general, user charge in private health facilities (Tshs. 3,200) was nearly 6 times higher than public health facilities (TShs 500) while that of voluntary (TShs 2,100) was 4 times higher than public health facilities (Table 20). Among interviewees who responded that the user charge was cheap, the median payment was TShs. 500 in public health facilities, TShs. 1,250 in voluntary health facilities and TShs. 980 in private health facilities (Table 20). In subjects who reported that their user charge was reasonable, the median payment was TShs. 400, TShs. 1,885, and Tsp. 3,200 in public, voluntary and private health facilities respectively; Similarly if they said it was expensive, the median payment was Tsp. 2,590, Tsp. 3,338 and Tsp. 9,500 respectively.

Table 20. Client's perception of user charge in public, voluntary, and private health facilities in Mara and Kilimanjaro regions.

| Opinion on user charge | | <u>Type of Health facility</u> | | |
|------------------------|--------|--------------------------------|------------------|----------------|
| | | <u>Public</u> | <u>Voluntary</u> | <u>Private</u> |
| Cheap | Number | 69 | 9 | 3 |
| | Median | 500 | 1,250 | 980 |
| | Range | 150-500 | 700-2,500 | 100-1,850 |
| Average | Number | 83 | 159 | 118 |
| | Median | 400 | 1,885 | 3,200 |
| | Range | 150-6,550 | 50-8,000 | 500-45,800 |
| Expensive | Number | 7 | 31 | 18 |
| | Median | 2,590 | 3,338 | 9,500 |
| | Range | 150-6,150 | 950-17,500 | 11,000-45,820 |
| All | Number | 159 | 199 | 139 |
| | Median | 500 | 2,100 | 3,200 |
| | Range | 150-6,550 | 50-17,500 | 100-45,820 |

The median cost of treatment for an acute illness in public, voluntary and private healthy facilities was Tsp 500, Tsp 2,500, and Tsp. 3,200 respectively. Similarly for a chronic illness in public, voluntary and private health facility the median cost of treatment was Tsp. 300, Tsp 2,315 and Tsp 1,800 respectively (see Table 21).

Table 21. Median cost of Treatment by type of illness and facility (Tsp.)

| <u>Type of illness</u> | | <u>Public</u> | <u>Voluntary</u> | <u>Private</u> |
|------------------------|--------|---------------|------------------|----------------|
| Acute | number | 149 | 160 | 137 |
| | Median | 500 | 2500 | 3200 |
| | Range | 150-6550 | 270-7000 | 100-45820 |
| Chronic | number | 21 | 76 | 7 |
| | Median | 300 | 2315 | 1800 |
| | Range | 150-3500 | 50-7500 | 1000-8270 |
| All | number | 170 | 237 | 144 |
| | Median | 500 | 2500 | 3200 |
| | Range | 150-6550 | 50-7500 | 100-45820 |

Mode of payment of User fees

The mode of payment for the majority of patients was through out of pocket (94.3%). The percentage of subjects who said that their employer paid their user charges was twice as large in private compared to voluntary health facilities and 7 times as large in private compared to public health facilities (Table 22).

Table 22. Mode of payment for services in 3 different type of health facilities in Mara and Kilimanjaro Regions.

| <u>Mode of Payment</u> | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|------------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Out of pocket | 183 | (96.3) | 246 | (95.3) | 136 | (90.0) | 565 | (94.3) |
| Parastatal | 2 | (1.1) | 8 | (3.1) | 12 | (7.9) | 22 | (3.7) |
| Didn't pay | 5 | (2.6) | 4 | (1.6) | 3 | (2.0) | 12 | (2.0) |
| All | 190 | (100.0) | 258 | (100.0) | 151 | (100.0) | 599 | (100.0) |

Willingness to pay

When asked what they would be willing to pay given that they had responded that their user charge was expensive, 42 clients suggested lower rates. Although there were 7 clients from public health facilities who had previously responded that the charge was expensive, none of them opted to give an alternative rate. On the contrary, 31 clients interviewed in voluntary facilities suggested a user charge of TSP 1,500 per episode would be reasonable (Table 23). Similarly 10 out of 18 clients from private health facilities who had initially responded that their user charge was expensive suggested a rate of Tsp.3,500 per episode as being reasonable compared to the median payment of Tsp. 9,500 that they had incurred for treatment.

Table 23. Willingness to pay among subjects who reported that current user charges were expensive in three different types of health facilities.

| Amount Willing to pay (TShs) | <u>Type of health facility</u> | | |
|------------------------------------|--------------------------------|-----------|------------|
| | Public | Voluntary | Private |
| Number | 1 | 31 | 10 |
| Median | 0 | 1500 | 3500 |
| Range | - | 0-20,000 | 500-25,000 |

Equal user charges for same illness

Patients were asked whether they should pay equal user charge for the same illness? Three out of four respondents (74.9%) in all categories of health facilities were in favour that individuals should pay equal charges for similar illness and a quarter were not in favour (Table 24).

Table 24. Perception on whether patients should pay equal charges for similar illness

| Equal Payment | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Yes | 145 | (80.6) | 173 | (68.9) | 115 | (78.2) | 433 | (74.9) |
| No | 35 | (19.4) | 78 | (31.1) | 32 | (21.8) | 145 | (25.1) |
| All | 180 | (100.0) | 251 | (100.0) | 147 | (100.0) | 578 | (100.0) |

Source of funds for user charges

Table 25 shows sources of funds to pay for user charges by type of health facility among subjects without exemption. More than half of subjects without exemption (58%) said that they obtained their user fees by selling crops, 24% had borrowed money from some one, 19% had sold livestock and 14% had received assistance from relatives. In public health facilities, 57% got their user charge by selling harvested crops, and 13.8% by selling livestock. In voluntary health facilities, 72% and 33% responded that they had sold crops and livestock respectively. Among private patients, 36% managed to get their user charges by selling crops, 28% by borrowing from someone and 26% by getting assistance from relatives.

Table 26 shows sources of hospital charges among all patients interviewed in the 3 types of health facilities. Fifty six percent of subjects said they had sold harvested crops, 23% had borrowed money from someone, 19% had sold livestock, 14% got assistance from relatives, 4% sold food reserves and 2% said they sold domestic items. Relatively larger percentage of patients attending private had received assistance from relative compared with patients attending public or voluntary health facilities. Similarly significantly larger percentage of patients attending voluntary than public or private health facilities had sold their harvested crops to so as to be able to their user fees (Table 26).

Table 25. Sources funds for paying user charges among subjects without exemption by type of health facility.

| Source of money for user charge | <u>Type of Health facility</u> | | | |
|---------------------------------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|
| | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
| Loan | 27/138 (19.6) | 47/207 (22.7) | 40/141 (28.4) | 114/486 (23.5) |
| Sold crops | 81/143 (56.6) | 154/213 (72.3) | 51/141 (36.2) | 286/497 (57.5) |
| Sold livestock | 19/138 (13.8) | 70/212 (33.0) | 6/141 (4.3) | 95/491 (19.3) |
| Sold domestic items | 0/138 (0) | 5/209 (2.4) | 5/141 (3.5) | 10/488 (2.0) |
| Assistance from relatives | 11/139 (7.9) | 22/209 (10.5) | 36/141 (25.5) | 68/489 (14.1) |
| Food Reserves | 2/137 (1.5) | 8/209 (3.8) | 9/133 (6.3) | 19/488 (3.9) |

Affordability

Eighteen patients (3%) were refused treatment because they were not able to pay their user fees (Table 27). None of them was from private health facilities. A total of 9 patients (3.5%) from voluntary and another 9 (4.7%) from public health facilities were also refused treatment for the same reason. Because of failing to pay user fees immediately after consultation 35 out of 564 patients (6.2%) deferred their payment (Table 28). Relatively larger percentage of patients who deferred payment were from private (10%) than with voluntary (7%) and public health facilities (1%) (Table 28).

Table 26. Source of hospital charges among all patients interviewed in 3 different types of health facilities in Mara and Kilimanjaro Regions.

| Source of User fees | <u>Public Voluntary</u> | | <u>Private</u> | <u>Total</u> |
|---------------------------|-------------------------|-------------------|------------------|-------------------|
| | Number (%) | Number (%) | Number (%) | Number (%) |
| Loan | 28/152 (18.4) | 48/213 (22.5) | 41/147 (27.9) | 117/512 (22.9) |
| Sold crops | 85/157 (54.1) | 159/219 (72.6) | 51/147 (34.7) | 295/523 (56.4) |
| Sold livestock | 21/152 (13.8) | 71/218 (32.6) | 6/147 (4.1) | 98/517 (19.0) |
| Sold domestic Item, | 1/152 (0.7) | 6/215 (2.8) | 5/147 (3.4) | 12/514 (2.3) |
| Assistance from relatives | 12/153 (7.8) | 23/115 (10.7) | 37/147 (25.2) | 72/515 (14.0) |
| Balance for food | 4/151 (2.6) | 8/215 (3.7) | 9/148 (6.1) | 21/514 (4.1) |

Table 27. Number of subjects who were refused treatment because they were not able to pay user fees by type of health facility.

| Refused treatment | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|-------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Yes | 9 | (4.7) | 9 | (3.5) | 0 | (0.0) | 18 | (3.0) |
| No | 182 | (95.3) | 249 | (96.5) | 149 | (100.0) | 580 | (97.0) |
| Total | 191 | (100.0) | 258 | (100.0) | 149 | (100.0) | 598 | (100.0) |

Table 28. Number of patients who deferred payment of user charges by type of health facility

| Deferred payment of user fees | <u>Type of health facility</u> | | | | <u>Total</u> Number (%) |
|----------------------------------|--------------------------------|--------------------------------|------------------------------|--|----------------------------|
| | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | | |
| Yes | 2 (1.2) | 18 (7.2) | 15 (10.4) | | 35 (6.2) |
| No | 166 (97.1) | 225 (90.4) | 128 (88.9) | | 519 (92.0) |
| I don't know | 3 (1.8) | 6 (2.4) | 1 (0.7) | | 10 (1.8) |
| All | 171 (100.0) | 249 (100.0) | 144 (100.0) | | 564 (100.0) |

Table 29. Median income (Tsp) of interviewed subjects by type of health facility.

| | | <u>Public</u> | <u>Voluntary</u> | <u>Private</u> |
|-----------|--------|---------------|------------------|----------------|
| Income | | | | |
| Per month | Number | 57 | 56 | 63 |
| | Median | 18,000 | 17,500 | 18,000 |
| | Range | 0-75,000 | 0-200,000 | 0-95,000 |

The median income of nearly 18,000 shillings per month was similar among patients seen in the three types of facilities but the range was from 0-75,000 in private, 0-200,000 in voluntary and 0-95,000 in private hospitals (Table 29).

4.1.3 EXEMPTION SYSTEM.

Exemption of User charges

Patients were asked whether they thought they deserved exemption of user charges and 42% (250/600) responded affirmatively. Three times as many clients from public and voluntary compared with private health facilities responded positively. The percentages were 49%, 51% and 16% among patients in public, voluntary and private health facilities respectively (table not shown). Table 30 shows the percentage of patients who wanted exemption of user charges in public, private and voluntary health facilities and by categories of age, sex, type of illness and whether they were in-patients or out-patients. Female patients with chronic illnesses compared with male and acutely sick patients were more likely to ask for exemption ($p < 0.05$). The percentage of patients who asked for exemption was 37% and 46% among male and females subjects respectively. And for chronic and acute illness patients it was 66% and 36% respectively (see table 30). Analysis by type of health facilities showed that in all categories, patients attending private health facilities were significantly less likely to ask for exemption of user charges compared with patients from public or voluntary facilities (Table 30).

Opinion on who should grant exemption

Respondents who had wanted to have exemption were asked for their opinion on who should grant exemption? Nearly half the subjects (57%) mentioned that the government should be responsible for granting exemption of user fees and 21% said hospital employees should do it (Table 31). Only a small percentage said that exemption should be given by the community (3%) or social workers (4.0%). Fifteen percent of the respondents could not decide on who should grant exemption. A large proportion of patients from private than public or voluntary health facilities mentioned that the Government should be responsible for granting exemption of user fees. The percentages were 82%, 76% and 37% respectively (Table 31).

Table 30. Number (%) of patients who wanted exemption of user charges in public, voluntary and private health facilities

| Categories of patients | | <u>Public</u> No (%) | <u>Voluntary</u> No (%) | <u>Private</u> No (%) | <u>Total</u> No (%) |
|------------------------|------------|-------------------------|----------------------------|--------------------------|------------------------|
| Age | ≤30 Years | 47/89 (52.8) | 44/89 (49.4) | 19/101 (18.8) | 110/279 (39.4) |
| | ≥30 years | 44/99 (44.4) | 86/167 (51.5) | 5/48 (10.4) | 135/314 (43.0) |
| Sex | Male | 43/98 (43.9) | 55/131 (42.0) | 13/69 (18.8) | 111/298 (37.2) |
| | Female | 51/95 (53.7) | 77/127 (60.6) | 11/80 (13.8) | 139/302 (46.0) |
| Type : | outpatient | 59/123 (48.0) | 98/201 (48.8) | 14/169 (12.8) | 171/433 (39.5) |
| | Inpatients | 34/69 (49.3) | 29/49 (59.2) | 10/40 (25.0) | 73/158 (39.5) |
| Type of illness | | | | | |
| | Acute | 74/164 (45.1) | 73/172 (42.4) | 23/142 (16.2) | 170/478 (35.6) |
| | Chronic | 20/29 (69.0) | 59/85 (69.4) | 1/7 (14.3) | 80/121 (66.1) |

Table 31. Opinion on who should grant exemption by type of health facility.

| Who should grant exemption | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|----------------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Government | 71 | (75.5) | 49 | (37.1) | 22 | (81.7) | 142 | (56.8) |
| Hospital employer | 14 | (14.9) | 38 | (28.8) | 1 | (4.2) | 53 | (21.2) |
| Community | 2 | (2.1) | 6 | (4.5) | 0 | (0.0) | 8 | (3.2) |
| Social workers | 2 | (2.1) | 8 | (6.1) | 0 | (0.0) | 10 | (4.0) |
| Don't know | 5 | (5.3) | 31 | (23.5) | 1 | (4.2) | 37 | (14.8) |
| All | 94 | (100.0) | 132 | (100.0) | 24 | (100.0) | 250 | (100.0) |

When asked whether they had ever been exempted from paying user charges in the health facilities which were currently attending, 4.7% responded positively. A relatively larger percentage of exempted subjects (8.9%) was from public health facilities than voluntary (2.3%) and private health facilities (3.4%) (Table 32).

Table 32. Number (percentage) of patients who had ever been exempted by type of health facility.

| Patient Exempted | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|------------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Yes | 17 | (8.9) | 6 | (2.3) | 5 | (3.4) | 28 | (4.7) |
| No | 173 | (91.1) | 250 | (97.7) | 144 | (96.6) | 567 | (95.3) |
| Total | 190 | (100.0) | 256 | (100.0) | 149 | (100.0) | 595 | (100.0) |

Equal treatment

About 57% of the patients attending treatment in various of health facilities thought that they had been given equal treatment similar to other patients with the same condition, 42% felt that they had received unequal treatment and 1% were uncertain (Table 33). This perception of equal treatment was similar in public, voluntary and private health facilities, also among male and female patients and young in comparison with older subjects (Table 34 and 35).

Table 33. Number (percentage) of patients who perceived that they received equal treatment by health facilities

| Equal Treatment | <u>Public</u> | | <u>Voluntary</u> | | <u>Private</u> | | <u>Total</u> | |
|-----------------|---------------|---------|------------------|---------|----------------|---------|--------------|---------|
| | Number | (%) | Number | (%) | Number | (%) | Number | (%) |
| Yes | 110 | (58.2) | 141 | (55.5) | 85 | (57.4) | 336 | (56.9) |
| No | 78 | (41.3) | 109 | (42.9) | 60 | (40.6) | 247 | (41.8) |
| Don't know | 1 | (0.5) | 4 | (1.6) | 3 | (2.0) | 8 | (1.3) |
| All | 189 | (100.0) | 254 | (100.0) | 148 | (100.0) | 591 | (100.0) |

Table 34. Equity in treatment by age and type of health facility

| | <u>Age \geq 30 years</u> | | | | <u>Age < 30 years</u> | | | |
|-----|---------------------------------------|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|
| | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
| Yes | 55 (56.7) | 97 (58.8) | 26 (8.5) | 178(57.8) | 55(60.4) | 44 (51.8) | 59 (59.6) | 158 (57.5) |
| No | 42 (43.3) | 68 (41.2) | 20 (43.5) | 130(42.2) | 36(39.6) | 41 (48.2) | 40 (40.4) | 117 (42.5) |
| All | 97 (100.0) | 165 (100.0) | 46 (100.0) | 308 (100.0) | 91(100.0) | 85(100.0) | 99 (100.0) | 275 (100.0) |

M-H χ^2 = 0.14

P=0.93 df = 2

M-H χ^2 = 1.64

P value = 0.43 df = 2

Table 35. Perceived equity in getting treatment for patients with similar illness by sex and type of facility

| Equity in Treatment | <u>Male</u> | | | | <u>Female</u> | | | |
|---------------------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|--------------------------------|-----------------------------------|---------------------------------|-------------------------------|
| | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) | <u>Public</u> Number (%) | <u>Voluntary</u> Number (%) | <u>Private</u> Number (%) | <u>Total</u> Number (%) |
| Yes | 55(57.3) | 73(57.5) | 24(61.2) | 169(58.3) | 55(59.8) | 68(55.3) | 44(56.4) | 167(57.0) |
| No | 41(42.7) | 54(42.5) | 26(38.8) | 121(41.7) | 37(40.2) | 55(44.7) | 34(43.6) | 126(43.0) |
| All | 96(100.0) | 127(100.0) | 67(100.0) | 290(100.0) | 92(100.0) | 123(100.0) | 78(100.0) | 293(100.0) |

MH- χ^2 0.31 p=0.85 df = 2MH- χ^2 = 0.45 P=0.7 df = 2.

4.2.0 COMMUNITY'S PERSPECTIVE

4.2.1 UTILIZATION HEALTH CARE SERVICES

The socioeconomic profile of the community shows that among 336 subjects interviewed, both sexes were equally represented, 26% were of less than 30 years of age, 86% were married and a half of the subjects (51.0%) had not completed 7 years of education (Table 36).

Accessibility based on distance

Fifty three percent (52.5%) of community respondents reported that they lived within a distance of 5 km from the nearest health facility and 78% lived within a distance of 10km (Table 37). [The respective figures from patient's data were 65% and 90% as shown in Table 3] About 22% of the subjects lived in areas which were located more than 10km away from the nearest health facility. Disaggregating the percentage of subjects with access (0-5km distance) by type of facility it appears that private hospitals were more accessible than public or voluntary health hospitals. Subjects who had to travel a distance of 5 to 10 km to go for treatment in public hospitals were almost twice compared with the percentage that had to go to voluntary and private hospitals (data not shown).

Among community members with either acute or chronic illness during the previous 3 months, similar means of travel to hospital were used. Only in acute illness cases that distance to the nearest hospital was positively associated with means of travel. The largest percentage of communities either walked or used public transport and only a small proportion used bicycles or rented a vehicle when they suffered from acute or chronic illness (Table 37).

Table 36. Socio-economic characteristics of Community subjects interviewed within the catchment area of public, voluntary and private hospitals in Kilimanjaro and Mara Region.

| Characteristic | Type of health facility attended | | | | Total N=336 No (%) |
|---------------------------|----------------------------------|-----------------------------|----------------------------|------------|--------------------------|
| | Public N=155 No (%) | Voluntary N=79 No (%) | Private N=102 No (%) | | |
| Age | | | | | |
| < 30 years | 40 (25.8) | 27(34.2) | 21 (20.6) | 88 (26.2) | |
| ≥ 30 years | 115 (74.2) | 52 (68.8) | 81 (79.4) | 248 (73.8) | |
| Sex | | | | | |
| Male | 52 (51.0) | 73 (47.1) | 41 (519) | 166 (49.4) | |
| Female | 50 (49.0) | 82 (52.9) | 38 (48.1) | 170 (50.6) | |
| Marital Status | | | | | |
| Married | 134 (86.5) | 67 (84.8) | 87(84.5) | 288 (85.5) | |
| Single | 1 (1.9) | 3 (3.8) | 3 (2.9) | 9 (2.7) | |
| Widowed | 15 (9.7) | 4 (5.1) | 7 (6.8) | 26 (7.7) | |
| Divorced | 3 (1.9) | 1 (1.3) | 3 (2.9) | 7 (2.1) | |
| Missing | 0 (0) | 4 (5.1) | 3 (2.9) | 7 (2.1) | |
| Level of Education | | | | | |
| < 7 years | 72 (46.5) | 42 (53.2) | 58 (56.3) | 172 (51.0) | |
| 7 years+ | 83 (53.5) | 37 (46.8) | 45 (43.7) | 165 (49.0) | |

Table 37. Access (distance) in relation to means of travel to various hospitals by type of illness

| Type of Illness | Distance (Km) | Used Bicycle | Public transport | Walking | Rented vehicle | Total |
|------------------------|---------------|--------------|------------------|------------|----------------|-------------|
| | No (%) | No (%) | No (%) | No (%) | No (%) | |
| Acute illness | | | | | | |
| | <5 | 28 (18.7) | 31 (20.7) | 83 (55.3) | 8 (5.4) | 150 (53.2) |
| | 5-10 | 7 (9.9) | 25 (35.2) | 25 (35.2) | 14 (19.7) | 71 (25.2) |
| | 10+ | 3 (4.9) | 37 (60.7) | 17 (27.9) | 4 (6.6) | 61 (21.6) |
| All | | 38 (13.5) | 93 (33.0) | 125 (44.3) | 26 (9.2) | 282 (100.0) |
| Chronic illness | | | | | | |
| | <5 | 2 (11.1) | 4 (22.7) | 11 (61.1) | 1 (5.6) | 18 (56.3) |
| | 5-10 | 0 (0.0) | 2 (22.2) | 4 (44.4) | 3 (33.3) | 9 (28.1) |
| | 10+ | 1 (9.1) | 8 (72.7) | 1 (9.6) | 1 (9.1) | 11 (21.6) |
| All | | 3 (7.9) | 14 (36.8) | 16 (42.1) | 5 (13.2) | 38 (100.0) |

Accessibility based on travel time

Three quarters of the community subjects could reach their nearest hospital within an hour (74.3%) and nearly a quarter (25.7%) in more than one hour (Table 38). Private compared with voluntary and public hospitals were significantly much more accessible within an hour, 72%, 64% and 62% respectively (table 39). The commonest means to travel to hospital by the community was by walking (43.6%), followed by use of public transport (34.5%), while the least used means was by the use of bicycles (12.5%), and by renting a vehicle (9.3%) (table 38) Nearly 40% of community subjects who walked to hospital took more than one hour to reach there.

Table 38. Access (time) in relation to Means of travel to various hospitals

| Time taken (Minutes) | Means of travel to various hospitals | | | | Total |
|-------------------------|--------------------------------------|------------------|------------|----------------|-------------|
| | Bicycle | Public transport | Walking | Rented vehicle | |
| | No (%) | No (%) | No (%) | No (%) | No (%) |
| 0-30 | 19 (45.2) | 76 (65.5) | 56 (38.4) | 24 (77.4) | 175 (52.2) |
| 31-60 | 17 (40.5) | 19 (16.4) | 32 (21.9) | 6 (19.4) | 74 (22.1) |
| 60+ | 6 (14.3) | 21 (18.1) | 58 (39.7) | 1 (3.2) | 86 (25.7) |
| All | 42 (12.5) | 116 (34.6) | 146 (43.6) | 31 (9.3) | 335 (100.0) |

Table 39. Accessibility (Time) in relation to type of health facility attended

| (Time in minutes) | Public | | Voluntary | | Private | | Total | |
|-------------------|--------|---------|-----------|---------|---------|---------|-------|---------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| 0 - 30 | 81 | (54.7) | 35 | (46.1) | 56 | (55.4) | 172 | (52.9) |
| 31 - 60 | 27 | (18.2) | 20 | (26.3) | 25 | (24.8) | 72 | (22.2) |
| > 60 | 40 | (27.0) | 21 | (27.6) | 20 | (19.8) | 81 | (24.9) |
| Total | 148 | (100.0) | 76 | (100.0) | 101 | (100.0) | 325 | (100.0) |

Three months History of illness and type

Community subjects were asked whether they had fallen sick in the previous three months and if so where had sought treatment or went for care. Ninety nine percent of them (99.4%) responded positively that they had fallen sic. The majority of those who got sick (87%) had suffered from an acute illness and 13% had a chronic illness (Table 40). The percentage of subjects with acute illness who had attended treatment in public hospitals was larger than

voluntary and private hospitals; 90%, 88% and 81% respectively.

Table 40. History of ever being sick in the past in the 3 months type of illness and type health facility attended

| Status | Type of Health Facility | | | Total |
|------------------------|-------------------------|------------|-------------|-------------|
| | Public | Voluntary | Private | |
| | No (%) | No (%) | No (%) | No (%) |
| Ever been Sick | | | | |
| Yes | 152 (99.3) | 79 (100.0) | 101 (99.0) | 332 (99.4) |
| No | 1 (0.7) | 0 (0.0) | 1 (1.0) | 2 (0.6) |
| Total | 153(100.0) | 79 (100.0) | 102 (100.0) | 334 (100.0) |
| Type of Illness | | | | |
| Acute | 138 (89.6) | 64 (81.0) | 91 (88.3) | 293 (87.2) |
| Chronic | 16 (10.4) | 15 (19.0) | 12 (11.7) | 43 (12.8) |
| Total | 154(100.0) | 79 (100.0) | 103 (100.0) | 336 (100.0) |

Reason for seeking treatment among community respondents

Commonest reason for attending treatment in the three types of health facilities was that the facilities provided good services (81%), and drugs were readily available (72%). Other reasons given were that forty percent patients had no alternative(40%), health workers were polite or the services were relatively cheap (24%). Disaggregating the reasons by type of health facilities attended, drug availability and good services ere singled out by more than 90% of subjects who attended private and voluntary hospitals than public health facilities and the difference was statistically significant ($p < 0.05$). It is also interesting to note that subjects who had no alternative were more likely to attend public health facilities than voluntary or private facilities.

Table 41. Reasons for attending the particular health facility

| Reasons for choice | Public | Voluntary | Private | Total |
|-----------------------|------------|-----------|-----------|------------|
| | No (%) | No (%) | No (%) | No (%) |
| Drugs available | 42 (40.4) | 51 (91.1) | 79 (98.8) | 172 (71.7) |
| Good Service | 69 (66.3) | 53 (94.6) | 73 (91.3) | 195 (81.3) |
| Polite H/Worker | 21 (20.2) | 15 (26.8) | 24 (30.0) | 60 (25.0) |
| Cheap | 33 (31.7) | 11 (19.6) | 14 (17.5) | 58 (24.2) |
| Rel. works here | 6 (5.8) | 0 (0.0) | 4 (5.0) | 10 (4.2) |
| No alternative | 60 (57.7) | 22 (39.3) | 14 (17.5) | 96 (40.0) |
| Others | 9 (8.7) | 1 (1.8) | 7 (8.8) | 17 (7.1) |
| TOTAL | 104 | 56 | 80 | 240 |

USER CHARGE AND MODE OF PAYMENT

Table 42. Average cost of transport and charges incurred on drugs by type of health facility.

| Type of hospital facility | Total Number of subjects | Average cost of transport (TShs) | Total Number of subjects | Average user fees incurred for drugs (TShs) |
|------------------------------|--------------------------------|--|--------------------------------|---|
| Public | 130 | 600 | 151 | 3700 |
| Voluntary | 57 | 2025 | 88 | 5400 |
| Public | 55 | 970 | 91 | 4680 |

Table 42 shows the average cost of transport and user fees incurred on drugs by type of health facility. The average cost of transport and drugs was higher among respondents who

went for treatment in voluntary hospitals compared with private and public hospitals. For transport alone the average cost of transport to public, voluntary and private hospitals were TShs. 600, 2025 and 970 respectively. Similarly, the average cost of transport to public, voluntary and private hospitals were TShs. 3400, 5400 and 4680 respectively. These rates suggest that costs for drugs alone appear to be higher than the recommended charges of the Government probably because of over prescribing.

Nearly 90% of the villagers responded that they had poor people in their community, and this was more pronounced among subjects who had attended private and voluntary than public health facilities during the previous 3 months.

Opinion was asked as to whether they thought the user charge for malaria was cheap, average or expensive. Nearly half of the subjects (49.4%) said that it was expensive and 45% felt it was average (Table 43). Significantly larger percentage of subjects who attended treatment in public compared to voluntary or private felt that the charge for malaria was expensive ($P < 0.05$). Similarly of those who said it was average, a larger percentage of them had attended private and voluntary health facilities than public hospitals.

They were asked if they would be willing to pay more in order to improve the quality of health services, two thirds (66%) were reluctant to do so and the remaining one third (34%) were positive (Table 44). The percentage of subjects who were unwilling to pay more for services was relatively larger among subject who had attended treatment in private than public and voluntary health facilities, 74%, 61 and 65% respectively (Table 22). However the difference (12.8%, 95% CI=1.3%, 24.3%) was statistically significant only when one compared public with private ($X^2 = 4.46$, $P < 0.05$) but not with voluntary health facilities.

Table 43. Relative price of malaria treatment in relation to type of hospital attended.

| Relative price | Public | Voluntary | Private | Total |
|----------------|-------------------|------------------|-------------------|-------------------|
| | No (%) | No (%) | No (%) | No (%) |
| Cheap | 5 (3.3) | 4 (5.2) | 3 (2.9) | 12 (3.6) |
| Average | 57 (37.7) | 39 (50.6) | 53 (52.0) | 149 (45.2) |
| Expensive | 85 (56.3) | 34 (44.2) | 44 (43.1) | 163 (49.4) |
| I don't know | 4 (2.6) | 0 (0.0) | 2 (2.0) | 6 (1.8) |
| TOTAL | 151(100.0) | 77(100.0) | 102(100.0) | 330(100.0) |

Table 44. Willingness to pay more in order to make services better.

| Willingness to pay more | Public | Voluntary | Private | Total |
|-------------------------|-------------------|------------------|-------------------|-------------------|
| | No (%) | No (%) | No (%) | No (%) |
| Yes | 60 (39.0) | 27 (34.6) | 27 (26.2) | 114 (34.0) |
| No | 94 (61.0) | 52 (65.4) | 76 (73.8) | 221 (66.0) |
| Total | 154(100.0) | 78(100.0) | 103(100.0) | 335(100.0) |

Respondents were asked whether they received equal treatment which resembled any other person with a similar illness. Thirty two percent of them responded that they received equal treatment, a quarter were negative and 44% were uncertain (Table 45). Compared to public and voluntary health facilities, patients who attended private health facilities during their

previous illness 3 months ago were less likely to agree that they got equal treatment just any other one with a similar illness ($P < 0.05$).

Table 45. Perceived equality in treatment for similar illness

| Perceived equality | Public | | Voluntary | | Private | | Total Perceived | |
|--------------------|--------|---------|-----------|---------|---------|---------|-----------------|---------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| Yes | 53 | (34.2) | 38 | (35.4) | 26 | (25.5) | 107 | (31.8) |
| No | 42 | (27.1) | 15 | (19.0) | 25 | (24.5) | 82 | (24.4) |
| I Don't know | 60 | (38.7) | 36 | (45.6) | 51 | (50.0) | 147 | (43.8) |
| Total | 155 | (100.0) | 79 | (100.0) | 102 | (100.0) | 336 | (100.0) |

PRICING SYSTEM FOR REFERRALS

On being asked whether each patient should be charged equally for the similar illness, 36.4% responded affirmatively and 63.6% did not and the difference between these two percentages was statistically significant (Table 46). Nevertheless there was no difference in responses when one compares the three different types of facilities.

Table 46. Opinion on whether every patient should pay equal fees for treatment of similar illness?

| Equal fees | Public | | Voluntary | | Private | | Total | |
|------------|--------|---------|-----------|---------|---------|---------|-------|---------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| Yes | 55 | (35.9) | 28 | (35.4) | 38 | (38.0) | 121 | (36.4) |
| No | 98 | (64.1) | 51 | (64.6) | 62 | (62.0) | 211 | (63.6) |
| Total | 153 | (100.0) | 79 | (100.0) | 100 | (100.0) | 332 | (100.0) |

Table 47. Distribution of subjects with their opinion on whether equal payment should be made for a similar illness by income per month

| Equal payment for similar illness | | | | |
|-----------------------------------|-----------|------------|-------------|---------------------|
| Income/month (TShs) | Yes | No | Total | Odds Ratio (95% CI) |
| <= 17500 | 58 (40.0) | 87 (60.0) | 145 (62.5) | 1.7 (0.9, 3.1) |
| > 17500 | 25 (28.7) | 62 (71.3) | 87 (37.5) | --- |
| All | 83 (35.8) | 149 (64.2) | 332 (100.0) | |

Parentheses are percentages.

Each subject was also asked "Do you think every patient should pay equal user fees for a similar illness" and their responses were analyzed in relation to income per month. The average income of community respondents was TShs 16,350 and the range was from 0-100,000 shillings, suggesting that there were some people who earned nothing per month. Given that the basic minimum salary is TShs 17,500 per month, data were analyzed to relate the community's response with income earned per month. Later data were categorized into two groups: those earning up to TShs 17,500 per month and those getting more than that amount per month. Table 47 shows that people who earned nothing up to TShs 17,500 per month were 1.7 times more likely to agree that individuals should pay equal user fees for a similar illness compared to those who earned more than TShs 17,500 per month but the difference these two income groups was not statistically significant (OR=1.7, 95% CI=0.9, 3.1). Similarly, the need for equal payment for a similar illness was negatively associated with the subject's geographic location (region) and sex, and whether one was living in a rented house, or owned a "shamba" (farm).

Table 48. Equal payment of user fee for a similar illness in relation to income per month by type of health facility.

| Income/month (Tshs) | Equal payment for similar illness | | | | | |
|------------------------|-----------------------------------|-----------|-----------------|-----------|-----------------|-----------|
| | Public | | Voluntary | | Private | |
| | Yes | No | Yes | No | Yes | No |
| <= 17500 | 39 (46.4) | 45 (53.6) | 5 (21.7) | 18 (78.3) | 14 (37.8) | 23 (62.2) |
| > 17,500 | 8 (23.5) | 26 (76.5) | 8 (26.7) | 22 (73.3) | 9 (39.1) | 14 (60.9) |
| Odds Ratio (95 %CI) | 2.8 (1.1, 8.0) | | 0.76 (0.2, 3.3) | | 0.95 (0.3, 3.2) | |

Stratifying the data by type of health facility showed that only in public hospitals that income per month appeared to be positively associated with higher opinions that equal payment should be made for a similar illness. The odds ratio was rather wide, 2.8 (95% CI= 1.1, 8.0) because of small numbers in one of the cells (Table 48).

EXEMPTION SYSTEM

Table 49. Number of subjects who responded that poor people were present in the village in relation to the type of health facility attended

| Poor people present | Public No (%) | Voluntary No (%) | Private No (%) | Total No (%) |
|---------------------|------------------|---------------------|-------------------|-----------------|
| Yes | 115 (84.6) | 66 (94.3) | 88 (92.6) | 269 (89.4) |
| No. | 21 (15.4) | 4 (5.7) | 7 (7.4) | 32 (10.6) |
| TOTAL | 136(100.0) | 70(100.0) | 95(100.0) | 301(100.0) |

Table 50. Things which show somebody is relatively rich in the community.

| Identity factor | Public | Voluntary | Private | Total |
|--------------------------------|-------------|-------------|-------------|-------------|
| | No (%) | No (%) | No (%) | No (%) |
| Good housing | 95 (31.0) | 4 (30.9) | 73 (39.0) | 215 (33.3) |
| Owens no farm | 81 (26.5) | 52 (34.2) | 58 (31.0) | 191 (29.6) |
| Employed/ educated children | 43 (14.1) | 19 (12.5) | 16 (8.6) | 78 (12.1) |
| Owens a vehicle | 34 (11.1) | 14 (9.2) | 13 (7.0) | 61 (9.5) |
| Has Good income | 48 (15.7) | 19 (12.5) | 26 (13.9) | 93 (14.4) |
| Don't know | 5 (1.6) | 1 (0.7) | 1 (0.5) | 7 (1.1) |
| Total | 306 (100.0) | 152 (100.0) | 187 (100.0) | 645 (100.0) |

When asked how do they recognize poor people, 29% said if they are disabled ("vilema), 33% if they have reached old age, 24% if they have poor living condition (Table 50). There was no significant difference in the various ways in which communities recognize poor people among community members who attended treatment in the 3 types of hospitals during the previous 3 months. When asked to mention three things which could be used to identify people who are not poor, 33% mentioned good housing and healthy state, 30% said if they own a farm, and 14% mentioned if they have employment or have educated children. All the responses were similar regardless of type of health facility attended in the previous 3 months.

Table 51. Various ways of identifying poor people in the community

| Identity factor | Public | Voluntary | Private | Total |
|-----------------------|-------------|------------|------------|-------------|
| | No (%) | No (%) | No (%) | No (%) |
| Poor living condition | 60 (26.7) | 26 (22.2) | 33 (21.7) | 119 (23.8) |
| No educated children | 13 (5.8) | 2 (1.7) | 6 (3.9) | 21 (4.2) |
| Old age | 70 (31.1) | 44 (37.6) | 53 (34.9) | 167 (33.4) |
| Disabled | 82 (36.4) | 45 (38.5) | 60 (39.5) | 193 (38.6) |
| Total | 225 (100.0) | 117(100.0) | 152(100.0) | 500 (100.0) |

When asked whether the community was involved at all in deciding about user charges in hospitals, 99% of the subjects answered they were not (Table 51). The community was asked if they were aware of any individuals in the community who had been granted an exemption of user charges in various treatment facilities and only 5% responded that they knew someone while 95% responded negatively (Table 52).

During interviews respondents were also asked their opinion on who should be exempted from paying user charges in all facilities. More than 90% of community subjects mentioned very poor people; a half mentioned pregnant women and young children (Table 53). Community subjects who had attended treatment from private health facilities in the previous 3 months were significantly more likely to mention that pregnant women and children should be exempted than respondents who had attended public or private health facilities; 59%, 47% and 36% respectively ($P < 0.05$). Respondents were asked who should decide whom to exempt user charges. About 90% of subjects mentioned the government, 4% health workers, 3.6% said villagers and none of the respondents mentioned social workers (Table 54).

Table 51. Distribution of Community members who mentioned that their community was involved in decision about user charge in hospitals by type of health facility attended

| Com. Involved | Public | | Voluntary | | Private | | Total | |
|---------------|------------|----------------|-----------|----------------|-----------|----------------|------------|----------------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| Yes | 1 | (0.6) | 1 | (1.3) | 1 | (1.0) | 3 | (0.9) |
| No | 153 | (99.4) | 78 | (78.7) | 97 | (99.0) | 328 | (99.1) |
| TOTAL | 154 | (100.0) | 79 | (100.0) | 98 | (100.0) | 331 | (100.0) |

Table 52. Awareness of existence of exemption system in the village among community subjects who attended treatment in the 3 types of hospitals.

| Awareness of Exemption | Public | | Voluntary | | Private | | Total | |
|------------------------|------------|----------------|-----------|----------------|------------|----------------|------------|----------------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| Yes | 7 | (4.6) | 4 | (5.3) | 4 | (3.9) | 15 | (4.5) |
| No | 145 | (95.4) | 72 | (94.7) | 98 | (96.1) | 315 | (95.5) |
| Total | 152 | (100.0) | 76 | (100.0) | 102 | (100.0) | 330 | (100.0) |

Table 53. Opinion on who should be exempted from user charges

| People to exempt | Public | | Voluntary | | Private | | Total | |
|------------------|------------|----------------|-----------|----------------|------------|----------------|------------|----------------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| Poor people | 142 | (93.4) | 71 | (93.4) | 94 | (92.2) | 307 | (99.7) |
| Preg. women | 72 | (47.4) | 27 | (35.5) | 60 | (58.8) | 159 | (51.6) |
| All citizens | 11 | (7.2) | 6 | (7.9) | 2 | (2.0) | 19 | (6.2) |
| Others | 24 | (15.8) | 8 | (10.5) | 18 | (17.60) | 50 | (16.2) |
| Total | 152 | (100.0) | 76 | (100.0) | 102 | (100.0) | 308 | (100.0) |

Table 54. Opinion on who should decide whom to exempt for user charges.

| Who to Decide | Public | | Voluntary | | Private | | Total | |
|----------------|------------|----------------|-----------|----------------|------------|----------------|------------|----------------|
| | No | (%) | No | (%) | No | (%) | No | (%) |
| H/workers | 6 | (3.9) | 3 | (3.8) | 5 | (4.9) | 14 | (4.2) |
| Government | 140 | (91.5) | 69 | (88.5) | 92 | (89.3) | 301 | (89.6) |
| Village | 3 | (2.0) | 5 | (6.4) | 4 | (3.9) | 12 | (3.6) |
| Social welfare | 1 | (0.7) | 0 | (0) | 1 | (1.0) | 2 | (0.6) |
| I don't know | 3 | (2.0) | 0 | (0) | 2 | (1.9) | 5 | (1.5) |
| Others | 1 | (0.7) | 0 | (0) | 1 | (1.0) | 2 | (0.3) |
| Total | 153 | (100.0) | 78 | (100.0) | 105 | (100.0) | 336 | (100.0) |

CHANGES AFTER COST SHARING

Community subjects were asked whether they had observed any charges since cost sharing of health care services was introduced. Nearly three quarters of the subjects (77%) responded that the services had become poorer than before, 16% said there had not been any change while 7% thought the services had improved (Table 55). The above picture was similar in all the three types of facilities.

When asked whether there had been any change in their relationship with health providers, 74% responded it had become poorer than before introduction of cost sharing, 21% said there had not been any change while 6% thought it had improved. Although it appeared that the percentage of subjects who responded that services had become poorer was relatively smaller in public compared to voluntary and private health facilities, the difference was marginally significant. Subjects were also asked whether they thought there had been a change in waiting time after introduction of cost sharing of health care services; 74% of the subjects responded that waiting time had become worse, 14% thought it was better and 13% said they had not been any change (Table 55). Although subjects who attended treatment in voluntary health facilities thought waiting time was worse compared to spent in private or

public health facilities, the difference was not significant.

Table 55. Observed changes since cost sharing exercises began by type of hospitals.

| Observed changes | Public | | Voluntary | | Private | | Total |
|---|------------|----------------|-----------|----------------|------------|----------------|--------------------|
| | No | (%) | No | (%) | No | (%) | No (%) |
| Services | | | | | | | |
| No change | 24 | (15.7) | 7 | (8.9) | 21 | (20.4) | 52 (15.5) |
| Better | 12 | (7.8) | 9 | (11.4) | 3 | (2.9) | 24 (7.2) |
| Poorer | 117 | (76.5) | 63 | (79.7) | 79 | (76.7) | 259 (77.3) |
| Relationship with Health workers | | | | | | | |
| No change | 33 | (21.6) | 16 | (21.1) | 20 | (19.8) | 69 (20.9) |
| Better | 12 | (7.8) | 3 | (3.9) | 3 | (3.0) | 18 (5.5) |
| Poorer | 108 | (70.6) | 57 | (75.0) | 78 | (77.2) | 243 (73.6) |
| Waiting time | | | | | | | |
| No change | 20 | (12.9) | 8 | (10.3) | 14 | (13.6) | 42 (12.5) |
| Better | 23 | (14.8) | 9 | (11.5) | 14 | (13.6) | 46 (13.7) |
| Poor | 112 | (72.3) | 61 | (78.2) | 75 | (72.8) | 248(73.5) |
| Total | 155 | (100.0) | 78 | (100.0) | 103 | (100.0) | 336 (100.0) |

4.3 HEALTH WORKERS PERSPECTIVE

HEALTH WORKER'S PERCEPTION ON EQUITY OF ACCESS AND COMMUNITY INVOLVEMENT

Community Involvement

Health workers were interviewed on community involvement in making decisions on different matters in the hospital. One of the issues was the process of exempting the poor. They were asked to report if the community was involved in any way to grant exemptions to patients who cannot afford to pay for treatment (see Table 56).

Table 56. Proportion of health workers who reported whether the community was involved /not involved to grant exemptions by type of health facility.

| Is the community involved | Type of Health Facility | | | |
|---------------------------|-------------------------|-----------|---------|-------|
| | Public | Voluntary | Private | Total |
| Yes | 45.5 | 24.0 | 0.0 | 32.3 |
| No | 36.4 | 56.0 | 42.9 | 44.6 |
| Don't Know/Not sure | 18.2 | 20.0 | 57.1 | 23.1 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

The community was to some extent reported by health workers of public hospitals (46%) and those of voluntary hospitals (24%) to be involved in granting exemptions. None of the workers in private health facilities knew if there was any community involvement in granting exemption fees.

Those who knew if the community was involved in granting exemptions, were asked what was the role of the community in that process. Their involvement was mentioned to be in three different ways. First, the community was involved in identifying the poor and giving them (patients) some form of identification for free treatment (mentioned by health workers in public and voluntary hospitals). Second, the community was involved in deciding the criteria for exemption, and was also mentioned by health workers from both public and voluntary hospitals. Third, the community was involved in providing the socio-economic status of its members to the hospital administration when need be. This was also mentioned by health workers from both public and voluntary hospitals. Health workers were also asked to report if their hospitals had any community representation in their management committees. The majority (46%) of the health workers in public hospitals and the minority (20%) in voluntary hospitals and none in private hospitals reported that they had any community representation in their hospital management committees.

PAYMENT OF USER FEES BY GRADE

Table 57. Proportion of health workers responses on different payment according to grade

| Do you have payments by grade | Public | Voluntary | Private | Total |
|-------------------------------|--------|-----------|---------|-------|
| Yes | 42.4 | 76 | 42.9 | 55.4 |
| No | 51.5 | 12 | 28.6 | 33.9 |
| Not sure | 6.1 | 4 | 0 | 6.2 |
| Missing | 0 | 8 | 28.6 | 6.2 |

Health workers were asked to report if different prices were charged for the same treatment given in patients attending treatment in grade I-III. Most of the workers (52%) in the public

district hospital declined, (this could be because of the district hospitals had only one grade), while most of the workers in voluntary (76%) and private hospitals (43%) reported that they had different treatment prices according to grades for the same treatment (Table 57).

Table 58. Percentage of health workers who knew which type of health services patients were ready to pay for by type of health facility

| Type of service | Type of health facility | | |
|-----------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Consultations | 18.2 | 20.0 | 14.3 |
| Medications | 63.6 | 92.0 | 42.9 |
| Investigations | 27.3 | 48.0 | 28.6 |
| Outpatient/bed | 18.2 | 52.0 | 14.3 |
| Others | 3.0 | 16.0 | 14.3 |

Most of the health workers in public (63%), voluntary (92%) and private (43%) were sure that patients were ready to pay for medications than the other types of health services provided at their hospitals (Table 58). Consultation fee was reported to be the most unpopular payment to patients in all hospitals. This is an indication that most of the health workers in all facilities are not well informed of what their patients are supposed to pay for. This is because the respondents were health workers from different sections of hospitals. Health workers were also asked to report why they thought patients were ready to pay for the type of services they paid for. Most workers in private hospitals (66.7%) thought that people were paying for the services which they expected to get immediate benefits, while about 17% said sometimes patients have no alternatives hence end-up paying for any charges.

Table 59. Health workers perception on why patients were paying for services by type of facility

| Perceptions | Type of health facility | | |
|--------------------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| They get immediate benefit | 5.7 | 37.5 | 66.7 |
| They don't have an alternative | 14.3 | 12.3 | 16.7 |
| Services are always available | 25.7 | 42.5 | 16.7 |
| They are not very expensive | 48.6 | 5.0 | 0 |
| Other | 5.7 | 2.5 | 0.0 |

Whereas 43% of the health workers in voluntary hospitals thought their clients paid because the services were always available; 48.6% of the workers in public health facilities thought people were paying because their services were cheap (Table 59).

Table 60. Percentage of health workers who reported that they knew if hospital administrators were involved in deciding what should be paid for by type of health facility.

| Response | Type of health facility | | | |
|--------------------|-------------------------|-----------|---------|-------|
| | Public | Voluntary | Private | Total |
| Not involved | 36.4 | 8 | 0.0 | 21.5 |
| Sometimes involved | 15.2 | 12.0 | 0 | 12.2 |
| Always involved | 30.3 | 72 | 85.7 | 52.3 |
| Don't know | 0 | 4 | 0 | 1.5 |
| Missing | 18.2 | 4 | 14.3 | 12.3 |
| Total | 100 | 100 | 100 | 100 |

The majority of health workers (72%) in voluntary and private hospitals (85.7%) were sure that their administrators were always involved in deciding what patients should pay for (Table 60). On the other hand in public hospitals, 36% of the workers appeared to be certain that their administrators were not always involved in deciding what patients should pay for since the levels of payments were decided by the Ministry of Health.

Table 61 shows that among outpatients, there was equality in the treatment cost for malaria when one compares average cost of treatment in public with that of voluntary and private health

facilities, that is, TShs. 1042, 1241, and 1333 respectively. For chronic illness such as hypertension, treatment costs were higher and equal for public and private hospitals compared to voluntary hospitals (table 61) while for diabetes the charges were higher in private compared to public and voluntary hospitals where the prices were similar.

Among inpatients, if one compares with public hospitals, the average cost of treatment for malaria was twice as high in voluntary hospitals while in private it was three times as high. For hypertension, the average cost of treatment in voluntary and private hospitals was four times higher than that of public hospitals. Similarly, in diabetic patients the cost in voluntary hospitals was 8 times more than public hospitals while in private hospitals it was twice that of public hospitals. The table also shows that chronic patients were exempted from payment in public hospitals but not in voluntary and private hospitals.

Table 61. Average amount of money spent and the range in Tanzania Shillings on some acute and chronic diseases per visit and per admission by health facility type.

| DISEASES | Type of health facilities | | |
|--------------------------|---------------------------|----------------------|----------------------|
| | Public | Voluntary | Private |
| a) <u>Per visit:</u> | | | |
| MALARIA | 1042 50-5000)* | 1241 (350-3500) | 1333 (1000-2000) |
| HYPERTENSION | 1533 (0-5000) | 870 (250-1400) | 1333 (700-2500) |
| DIABETES | 730 (0-4000) | 880 (500-1600) | 1266 (800-1500) |
| b) <u>Per admission:</u> | | | |
| MALARIA | 1565 (300-10000) | 3572 (1500-10000) | 4500 (100-10000) |
| HYPERTENSION | 1393 (0-4900) | 5200 (1500-15000) | 5525 (1100-10000) |
| DIABETES | 730 (0-5000) | 5750 (100-12000) | 1750 (1500-2000) |

NB* Figures in parenthesis are ranges.

EXEMPTIONS

Some workers in all health facilities reported to be aware of the existence of some form of exemptions to patients who were not able to pay.

Table 62. Proportion of health workers who were aware of the existence of exemption mechanisms in their hospitals by type of health facility.

| Awareness of existence of exemption | Type of Health Facility | | |
|-------------------------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Yes | 81.8 | 96.0 | 28.6 |
| No | 12.1 | 0.0 | 57.1 |
| Not sure | 6.1 | 4.0 | 14.3 |

Most of the health workers in public (82%) and voluntary (96%) were aware of the existence of an exemption mechanism in their facilities as compared with 29% of the health workers in private health facilities (Table 62). This could be due to the fact that private hospitals are mainly aiming at maximizing profits and not benefits to the consumers. the waiver/exemption could only be given by the owner of the hospital or any other person who has some financial attachments with the hospital.

Most of the health workers in public hospitals (70%) knew that patients under vertical programmes were supposed to be exempted from paying user fees while 48% and 14% of the workers in voluntary and private hospitals respectively, knew that (Table 63).

Table 63. Proportion of health workers who knew which type of patients were exempted from paying by type of health facility.

| What type of patients are exempted | Type of health facility | | |
|---|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Chronic patients | 45.5 | 24.0 | 14.3 |
| Referred patients | 6.0 | 12.8 | 14.3 |
| Emergency patients | 12.0 | 16.0 | 42.9 |
| Patients under vertical programs e.g. TB, Leprosy | 70.0 | 48.0 | 14.3 |
| Other | 15.0 | 32.0 | 14.3 |

The commonest action which hospital administrators take when they have a patient who cannot pay user fees but does not meet the laid down criteria was that patients or relatives would commit themselves to pay later. This was reported by 54% of health workers in public, 76% in voluntary and 43% in private hospitals (Table 64). The health workers in private hospitals reported that no free treatment was being given to people who cannot afford to pay. Payment in kind was also reported to be another common mode of payment in voluntary hospitals (12%).

The commonest criterion known by health workers in public (42%), voluntary (60%) and private (14%) hospitals was the socio-economic status of the patients. Age was also a factor mentioned by 64% of the health workers in public hospitals but was not a common criterion in voluntary hospitals and private hospitals where it was mentioned by 16% and 14% of the health workers respectively (Table 65).

Table 64. Proportion of health workers who knew what actions are taken against patients who cannot pay and do not meet the hospital exemption criteria by type of health facility.

| ACTION | Public | Voluntary | Private | Total |
|---------------------|--------|-----------|---------|----------|
| Give free treatment | 15.2 | 4 | 0 | 6(9.2) |
| Cannot be attended | 3 | 4 | 0 | 2(3.1) |
| Deferred payment | 54.6 | 76 | 42.9 | 40(61.5) |
| Payments in kind | 3 | 12 | 14.3 | 5(7.7) |
| Other | 18.2 | 0 | 14.3 | 7(10.8) |
| Do not know | 6.1 | 4 | 28.6 | 5(7.69) |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

The other observation from the above table is that all health facilities used a combination of criteria to exempt patients from paying user charges. The health workers were also asked to mention who initiates the application for exemption. The majority of the workers, in all hospitals, reported that in most cases it is the patients or their relatives who do it.

It was reported that only in rare cases that one would find the provider assessing the situation and applying the exemption on behalf of the patient.

Table 65. Proportion of health workers who knew what kind of criteria are used to determine eligibility of patients who cannot pay for their treatment by type.

| Criteria | Type of Health Facility | | |
|--------------------------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Age | 63.6 | 16.0 | 14.3 |
| Severity of illness | 24.2 | 20.0 | 14.3 |
| Statement of illness (acute/chronic) | 36.3 | 16.0 | 0.0 |
| Socio-economic status | 42.4 | 60.0 | 14.3 |
| Gender | 6.0 | 4.0 | 14.3 |
| Referred | 9.1 | 4.0 | 0.0 |
| Student | 9.1 | 0.0 | 0.0 |
| Other | 15.1 | 16.0 | 0.0 |

Administrators were asked to report how much income they had lost in the last three months prior the interview. From public hospitals and one voluntary hospitals it was reported that they had lost average of Tshs. 83,348 and Tshs. 200,000 respectively. Private hospitals did not report any loss during that period suggesting that patients were rarely being exempted in such hospitals.

The hospital administrator was the commonest person mentioned by health workers in all hospitals as the person who in most cases decides which patients to be exempted. This was mentioned by 60% of the health providers in voluntary, 43% in private hospitals and 33% in public hospitals (Table 66). The table also shows that all hospitals used more than one person to grant exemptions. No hospital was reported to have only one person to decide on who should be exempted.

Table 66. Proportion of health workers who knew who decided which patient to be exempted from paying by type of health facility.

| Who decides | Type of health facility | | |
|---------------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Special worker | 30.3 | 8.0 | 14.3 |
| Medical officer in charge | 9.1 | 4.0 | 0.0 |
| Administrator | 33.3 | 60.0 | 42.9 |
| Committee | 15.1 | 28.0 | 28.6 |

The commonest problem faced by persons who grant exemptions was reported to be the tendency of patients to claim for exemption while they can afford to pay (Table 67). The second problem was the difficulty in identifying the appropriate person to grant exemption in accordance with the laid down criteria. In public hospitals, this problem was mentioned by 39% of the health workers while in voluntary hospitals it was pointed out by 28% of the health providers. The common problems faced by the private hospitals in as far as exemptions are concerned were: too much blame from both patients and hospital administration (57%), probably because of the profit motive from private hospitals (Table 67).

Table 67. Main problems faced by people who grant exemptions by type of health facilities.

| Problems | Type of health facility | | |
|--|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Assessment of who is the right person to grant | 39.3 | 28.0 | 0.0 |
| Blames from patients | 12.1 | 4.0 | 28.6 |
| Blames from the administration | 9.1 | 8.0 | 28.6 |
| many patients asking for exemption | 3.0 | 0.0 | 14.3 |
| Tendency of patients to claim exemptions | 42.4 | 44.0 | 28.6 |
| Other | 30.3 | 20.0 | 0.0 |

Table 68. The average time used to grant exemption by type of health facility.

| Time | Type of health facility | | |
|----------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Less than 15 minutes | 30.3 | 32.0 | 14.3 |
| About half hour | 12.1 | 8.0 | 0.0 |
| About an hour | 12.1 | 0 | 14.3 |
| More than hour | 24.2 | 20.0 | 0.0 |
| Don't know | 21.2 | 40.0 | 71.4 |

Health workers were asked to report on the average time used to grant exemption. Data showed that most of the health workers in public (30%) and voluntary (32%) hospitals reported that the exemption process usually took less than 15 minutes while 71% of the private health workers did not know how much time it took because it was a rare activity in their facilities (Table 68).

Table 69. Proportion of health workers who reported the awareness of the exemption mechanism to patients by type of health facility.

| Patients | Type of health facility | | | |
|------------|-------------------------|-----------|---------|-------|
| | Public | Voluntary | Private | Total |
| Yes | 69.70 | 40.0 | 42.86 | 55.38 |
| No | 27.27 | 44.00 | 14.29 | 32.21 |
| Don't know | 3.03 | 16.00 | 42.86 | 12.31 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Overall 55% of the health care providers interviewed in all hospitals were confident that their clients knew of existence of an exemption mechanism. Nearly 70% of the health workers in public hospitals were sure that their patients knew of the exemption mechanism in their hospital

while in private and voluntary hospitals the percentages were 43% and 40% respectively (Table 69).

Health workers were asked to give their views on the impact of exemptions on patients demand for care in their respective hospitals. From all the three types of health facilities, most health workers, reported that their exemption mechanisms had a negligible impact on the demand for care because they thought it was neither stringent to consumers nor was it inducing other patients to seek alternative health care services from other health facilities (Table 70).

Table 70. The impact of exemptions on patients demand for care in their respective hospitals.

| Effect on demand | Type of health facility | | |
|--------------------------------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| More stringent to consumers | 12.1 | 36.0 | 0.0 |
| Somehow stringent to consumers | 21.2 | 0.0 | 0.0 |
| Less stringent | 6.0 | 16.0 | 14.3 |
| Not stringent | 48.5 | 28.0 | 28.6 |
| Repeals patients to other facilities | 9.1 | 20.0 | 14.3 |
| Does not repel patients | 48.5 | 40.0 | 28.6 |

Health workers were asked what happens to patients who do not qualify to be exempted but cannot pay during that episode or visit. Most of the health workers in all types facilities, including, public (55%), voluntary (76%) and private (43%) reported that such patients were provided with treatment only if they promised to pay later (deferred payment) (Table 71).

Table 71. Responses on what is done to patients who do not fall under the exemption criteria but cannot pay during that visit by type of health facility.

| | Type of health facility | | | |
|--------------------------|-------------------------|-----------|---------|-------|
| | Public | Voluntary | Private | Total |
| They are given free care | 15.15 | 4.00 | 0.00 | 9.23 |
| No treatment | 3.03 | 4.00 | 0.00 | 3.08 |
| Promise to pay later | 54.55 | 76.00 | 42.86 | 61.54 |
| Payment in kind | 3.03 | 12.00 | 14.29 | 7.69 |
| Other | 18.2 | 0.00 | 14.29 | 10.77 |
| Don't know | 6.06 | 4.00 | 28.57 | 7.69 |
| Total | 100.0 | 100 | 100 | 100 |

REFERRAL SYSTEM

Health workers were asked to report on the type of patients who they knew were usually referred to other facilities from their hospitals.

Table 72. Responses on what type of patients were usually referred by type of health facility.

| Type of patients | Type of health facility | | |
|--|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Serious patients | 6 | 8.00 | 14.3 |
| Any patient | 72.8 | 80.0 | 42.9 |
| Chronic patients/need specialized care | 54.6 | 52.0 | 28.6 |
| Any other | 3.0 | 0.0 | 0.0 |

Most health workers from all types of hospitals reported that they knew that any patients who they could not manage using the existing capabilities and equipments were normally referred. This was reported to be the standard procedure by 73%, 80% and 43% of the health providers in public, voluntary and private hospitals respectively (Table 72). Also most of them in all hospitals reported that they knew that most of the chronic patients were referred to higher facilities.

When asked if they usually ferry patients in critical conditions to the referred health units, most of the health workers in voluntary (52%) and private (57%) hospitals reported that they had a vehicle for transporting patients in critical conditions while only a few (33%) of the public hospitals had such facilities.

Health workers were also asked to report the number of malaria, hypertension and diabetes patients who had been referred to other health facilities in the last one month prior to the interview.

Table 73. Average number of malaria, hypertension and diabetic patients referred in the last month of interview by type of health facility.

| Disease | Type of health facility | | |
|--------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Malaria | 1.8(1-5) | 2(0-5) | 0(0) |
| Hypertension | 0.2(0-1) | 5(0-5) | 1(0-2) |
| Diabetic | 0(0) | 0(0) | 1(0-2) |
| Other | 1.6(0-2) | 1(1) | 1(0-2) |

*Figures in brackets are ranges.

Table 73 shows that no private hospital which reported to have had referred any malaria patient in the last one month prior to the interview. Most of the malaria patients, on average, were referred by public and voluntary hospitals which referred an average of 2 patients in that month with a range of 0 to 5 patients. Most hypertensive patients were reported to be referred by voluntary hospitals which referred an average of 5 patients with a range of 0 to 25 in the last month prior to the interview.

The hospitals health workers were also asked to report on number of malaria, hypertension and diabetic patients referred to them in the last month prior to the interview (see table 74 below).

Table 74. Average number of malaria hypertension and diabetic patients per hospital referred from other facilities to the studied hospitals by type of hospital.

| Disease | Type of health facility | | |
|--------------|-------------------------|-----------|---------|
| | Public | Voluntary | Private |
| Malaria | 8.6(0-35) | 12(2-27) | 0(0) |
| Hypertension | 5.6(0.25) | 3.5(1-11) | 0(0) |
| Diabetic | 0(0) | 2.8(1-8) | 0(0) |
| Other | 2.8(0-15) | 1.8(0-4) | 0(0) |

NB: The number in brackets are ranges.

While private hospitals referred at least one hypertensive and one diabetic patient, it was reported to have not received any referred patient in the three categories (Table 74). This could be because the private hospitals had no qualified medical person compared to voluntary and public hospitals. The general observation here is that public and voluntary hospitals received more malaria and hypertensive patients compared to what they referred.

5. DISCUSSION

The Government of Tanzania has always been committed to providing Tanzanians with equitable access and utilization of health services. The emphasis, based on the first Strategic Health Plan, was placed on the Government in providing and financing health services, while the role of the private sector was greatly being discouraged and restricted because it was seen to undermine government efforts to make services equitable (Ministry of Health, 1995). For more than two decades, equitable distribution of health service infrastructure was achieved, but because of poor performance of economy in the 1980's, the Ministry of health was faced with challenges which jeopardized its achievements in the first strategic plan.

In November 1993 the Health sector performance was appraised with the intention with of developing strategies to improve quality of health services as well as increasing equity in accessibility and utilization of health services. The vision of the new strategy was to develop a health service that was equitable, and of better quality, one which combines modalities of public and private mix that is sustainable, whose functions commensurate with its budgetary capacity. The previous role of being a major provider of health services was redefined to address legislation, regulation and control and provision of basic clinical and public health packages that are proven to be cost-effective. Alternative sources of financing to bridge the gap in financing of health including cost sharing, community financing, insurance systems, privatization of the health sector were encouraged so as to achieve sustainability in health financing.

Although there was six years delay before the Government of Tanzania could implement the restructuring of financing mechanisms for health care, lack of in-depth research to answer fundamental questions of equity, efficiency and effectiveness of the new financing policy have not yet been resolved (Minister of Health Budget Speech 1993). Nevertheless, the Government of Tanzania is still looking for ways of shifting the burden of payment on to users of health care in the form of charges at the time of use, community financing or privatization of the health sector. The health sector reform seems to point to this direction with a focus on the district health system (Ministry of Health, 1995).

Cost sharing through user charges in the public health care system in Tanzania was introduced in three phases. In July 1993, it was introduced in referral and regional hospitals and in July 1994 it was extended to district hospitals and the plan during phase three was to extend to health centers and dispensaries in 1995. This third phase has not implemented yet. The aim of introducing user charges was to generate revenue which would be used to improve quality of health care services and ensure sustainability of the public health sector. At the moment quality of health care services appears to have deteriorated at all levels of care to the extent that individuals, communities and some of the officials in the Government and political arena are seriously concerned about this state of affair. Similarly, those who pay taxes, including the rural poor who do not have access to the media are also even more concerned about what is happening to the social sector services.

According to a recent review of user charges for health care by Creese, there are no large scale experiences of user fees that have been used to improve quality and accessibility of services in a way that would compensate for the regressive effects of charges (Creese 1990). A recent study carried out in Dar es Salaam, Tanzania to assess the effect of user charge policy and the other non-price factors on the utilization of health services showed a sharp decline in utilization of outpatient health services following the introduction of user charges in district hospitals run by the government as from the third quarter of the year. The extent to which introduction of user charges affects equity in accessibility to health care services in public, voluntary and private health facilities in Tanzania is not well understood. This study was done to assess equity in access to health care in six public, voluntary and private hospitals and their respective communities in Mara and Kilimanjaro regions.

Equity in Access

Equity in health care was defined as "equal access to available care for equal need (irrespective of income, educational level, age sex, geographical location, health status, or some combination thereof) (Whitehead, 1990; Mooney, 1987; Musgrove, 1986). This study which was carried out among 609 patients, 336 community subjects and 65 health workers, has shown that based on distance and time taken to travel to the nearest hospital, there was equity in access to public,

voluntary and private hospitals in Mara and Kilimanjaro regions. Accessibility was not affected by other background characteristics like subject's sex, type of illness or type of hospital attended. Both men and women, had equal to access. Of the patients and community subjects interviewed, 53% and 65% lived within a distance of 5 km from a health facility respectively. Similarly, 78% of the community subjects and 90% of patients lived within a distance of 10 km from the nearest health facility. The proportion of patients that had access within 10km distance was statistically different from that reported by the community (difference = $12\% \pm 5\%$). This difference in perceived physical accessibility could be explained by differential literacy rate and the level of inaccuracy in estimating distance and time. In the community survey 49% of the subjects had not completed seven years of schooling as compared with 24.3% of the patients. Thus the reported distance is probably a subjective measurement rather than being a valid and reliable measurement of actual distance travelled. The shorter the estimate however, the higher the chances that it would be a correct estimate. In the event that a respondent had travelled by public transport or hired a bicycle/vehicle, he or she will be more likely to mention a shorter distance because most members of the community they tended to arrive at the hospital much earlier than subjects who walked.

The percentage of the population that had access to hospitals in Mara and Kilimanjaro regions appeared to be smaller than 72% of the population in Tanzania lives within a distance of 5km from a health facility while that of 90% living within a distance of 10km from a health facility was similar (MOH, 1984). The difference that is observed is probably because the national figures are based on access to dispensaries, health centers and hospitals. Nevertheless, it is not surprising that access at 10km appear to be similar because most patients who attend treatment in various levels of health facilities are self referrals. Hence it is unlikely that the proportion which has access to a hospital would be different from that which has access to a health center or dispensary.

One of the findings was that younger patients aged less than 30 years, compared to relatively older subjects aged 30 years or more, were significantly more likely to attend treatment in private than voluntary and public health facilities. Similar observations have been reported

among patients attending treatment in dispensaries and health centres in Coast region, (Urassa et al, 1994; Ahmed et al, 1996) and also among patients attending treatment in public and voluntary health facilities in Dar es Salaam, Tanzania (Kanji et al, 1992).

Although the patient's data suggested that younger subjects with acute conditions preferred to attend treatment in private hospitals compared to older subjects while relatively older patients with chronic illness had a tendency of being attended at public or voluntary hospitals, community data did not show any hospital preferences when univariate analysis was done by age, sex, type of illness and by type of hospital. This information suggests that there should be no change in policies related to utilization of specific types of hospitals based on patient or community characteristics.

Based on time taken to travel to hospital, 90% of the patients interviewed in this study reported that they got to the hospital in less than an hour. The figure of 90% appears to be much higher than the 67% reported from an outpatient survey carried out in Tanzania (Abel-Smith and Rawal 1992). The difference between Abel-Smith's data and the one above is probably due to use of different sample sizes and sampling method.

Analysis of means of travel to the three types hospitals, also showed that there was equity in access for both male and female patients; infact similar proportions used the same means of travel to get to the facility. Overall, half the patients walked to hospital, 22% used public transport, 16% hired a bicycle or vehicle and 8% used a privately owned vehicle. In each sex category, half the patients walked, a quarter used public transport, nearly 10% hired a bicycle and another 10% used either a rented vehicle or a privately owned vehicle. Abel-Smith and Rawal (1992) have also reported a similar figure among outpatients from urban areas (55%) while their figure for rural areas was much higher (84%). The main reason for the difference could be explained by economic disparity between urban and rural areas. However there is need to assess trends in health seeking behavior in urban and rural areas while taking to account the question of seasonality and economic situation of the study subjects.

Reasons for choice of a hospital

Respondents were asked to why they chose to attend treatment in the three types of hospitals and both patients and community subjects mentioned similar reasons. Among patients, short distance was mentioned by 61% of the subjects, drug availability 58%, health workers were polite 37%, and short waiting time 35%. Similarly among community subjects, "good service" was mentioned by 81% of the subjects, drug availability 72%, lack of alternative service 40%, health workers were polite 25% and services were relatively cheap was mentioned by 24% of the subjects. The commonest reasons mentioned for choice of public hospitals were short distance, services were relatively cheap and lack of an alternative. Private hospitals were chosen because of "good services", drug availability and short waiting time. We did not ask what they meant by good service though we can speculate they meant they provided better quality services as reflected by the high level of perceived client satisfaction.

The nearness factor seems to be the predominant reason for choice. Our findings appear to be consistent with a report by Mushi (1995) but not the ones by Kanji et al (1992) or by Abel-Smith et al (1992). The report by Mushi showed that 57.6% of patients interviewed gave short distance as the primary reason for their choice. However, Kanji et al (1992) reported a higher figure of 87% among out patients attending treatment in voluntary and public health facilities in Dar es Salaam, likewise Abel-Smith et al (1992) reported a figure of 81% among outpatients from other health facilities in mainland Tanzania.

Short distance was ranked as first reason for choice of public hospitals while in voluntary health facilities, it was the second reason and in private hospitals it was the third, 59%, 77% and 38% respectively.

Drug availability was the commonest reason for choice of voluntary and private hospitals; the percentages were 80% and 84% respectively (see table 10). On the contrary in public hospitals it was among the least given reason for utilizing them (7%). A similar reason for not using public health facilities was reported in 81% of answers given in the study by Abel-Smith and colleagues (1992)..

Latest surveys done in Kisarawe in November 1995 and Dar es Salaam have shown that the number of new attendances declined drastically after introduction of cost sharing. This suggests that this policy has had a negative impact on attendance partly because people were not educated enough about this new policy change. It appears, however, the impact was primarily on outpatients more than in patients. We do not know what happens to those patients who decide not to come. One can only speculate they decide to seek care directly from private pharmacies or from traditional healers, or they die.

While noting that three quarters of community subjects could get to a hospital within one hour, it is important to note that this high level of access was not a preferred choice for 40% of the subjects; instead they visited this type of facility because they did not have any other alternative. About 57.7%, 39.3% and 17.5% of the community subjects said they had no other alternative when they got sick in the previous 3 months, instead they went for treatment in public, voluntary and private hospital respectively. These figures seem to suggest that operationally, accessibility to various health facilities is limited when choices are unlikely to satisfy the needs and preference of a relatively large percentage of the target population as was the case of 40% of community subjects in this study.

It is suggested that in order to create equal preference to all types of hospitals the various weaknesses and deficiencies which have been pointed out should be corrected so as to be able to attract patients. Specifically, public hospitals should improve their drug availability, health workers politeness, and their clients waiting time,

Quality of care

Quality of care can be measured at three levels: at the policy level, the service delivery level and the client level but the methodology is still being improved so as to validate the linkage between access and quality of care (Bertrand et al 1995) The Bruce-Jain framework, the central paradigm for quality of family planning, emphasizes the importance of the client's perspective. It defines quality of care in terms of six fundamental elements or dimensions: choice of method (services....parenthesis mine), technical competence, information given to clients, interpersonal

relations, mechanisms to ensure follow-up and continuity, and an appropriate constellation of services (Jain 1989, Bruce 1990). The next part of this discussion will focus on the above dimensions, but based on the clients perspective.

The linkage between access and quality of health care has been carefully discussed by Bertrand et al (1995). The authors define access as the ability of an interested individual to make contact with or "reaches the door" of a service delivery point and is able to obtain services. Once that individual moves "inside the door" quality of care will greatly affect his/her decision to comply with instructions or continue to seek or use the services. However when clients are outside the facility they may be put off from seeking services by the apprehension about what they might experience if they were to do so (staff members who do not speak their language, unacceptably long waiting periods or disrespectful treatment from staff members, among others) (Bertrand, et al 1995).

One concern about quality is the question of who defines quality? While it is the client's perspective that is ultimately the most important determinant of health care services, clients are unable to make meaningful evaluation of some aspects of service quality (Bertrand et al 1995).

Availability of prescribed drugs

The availability of appropriate medication at the first point of contact with the health care system is probably one of the most important components of the quality of primary health care, and therefore a primary determinant of utilization.

In this study, inequity in utilization of health services based on availability of prescribed drugs was more evident in public than voluntary or private hospitals. Overall, 80% of the patients attending public hospitals were not satisfied with the quality of services because their prescribed drugs were not available.

There was also inequity in availability of prescribed drugs for both acute and chronic illnesses when comparing the three different types of facilities. Nearly 80% of acute illness patients in

public health facilities as compared with 4% in voluntary and 2% in private health facilities could not get their prescribed drugs available. Similarly, in chronic illness patients, 38% could not get their drugs in public compared with 2% in voluntary and none in private health facilities. Overall, three times as many patients suffering from acute compared with chronic illness could not get their prescribed drugs (see Table 11).

In Dar es Salaam, Kanji et al showed that availability of drugs was equivalent to good treatment and this was significantly higher in voluntary (81%) compared with Government health facilities (12%) (Kanji et 1992). Ahmed and colleagues (1996) have also shown that at dispensary level 11% of patients from public, 2% from voluntary and 3% from private did not get their prescribed drugs. Although this study did not find out whether each patient had received a correct prescription for a correctly diagnosed condition, a study done in public and voluntary facilities in Dar es Salaam reported that there was good prescribing habit among health providers working in public health facilities while in voluntary health facilities irrational prescribing was observed (Kanji et al, 1992). In some voluntary health facilities, Kanji et al (1995) observed major deficiencies in their prescriptions. Concerns were raised about problems of irrational prescribing of multiple drugs including antibiotics, failure to maintain minimum standards in making diagnosis and giving an appropriate prescription and staff incompetency (Kanji et al 1992, Kanji et al, 1995)

Utilization patterns at health facilities with frequent stock-outs" (interruption in the supply of drugs) in some African countries show trends that coincide closely with the arrival and exhaustion of pharmaceutical supplies at the health unit comments financing has been shown to be a partial confirm to the non availability and irregular supply of drugs.

Problem of drug shortages in public health facilities is a serious issue to the extent of making people fail to understand the usefulness of user charges. This is because introduction of user fees was meant to raise revenue which would be used improve quality of care through improvement of drug availability. Secondly, when people pay taxes and they expect to get a return from the Government; now if they do not get their return of investment they react negatively. In one

study done by Mushi (1995) subjects responded that they would be willing to pay more user fees if quality of services were to be improved. However, given that quality of services was not good at that moment the study by Mushi reported that 55% of subjects interviewed wanted current user charges to remain unchanged while another 35% wanted it to be abolished completely (Mushi 1995). Given that the situation of drugs in public hospitals needs to be improved there is need to find out how revenue which is generated through user charges is being utilized at local level.

Contributions that are made, through community financing, by individuals, families and communities are made in cash, in kind or in labour. Community health financing is being piloted as part of the World Bank project in Igunga district, Tabora region, since July, 1996. In this project, communities have been mobilized so that each family contributes 5000/= per year to cater for drugs in local dispensaries and health centres. So far anecdotal information seems to suggest that community involvement was very successful in deciding the amount of money to be paid by an individual family. Secondly, one month after launching of the project it has been observed that pattern of utilization of health services based on number of attendances did not increase following the arrival of a new kit of pharmaceutical supplies because communities had been reassured that they would have enough drugs in stock. hence there was no need for them to rush to the dispensary whenever they learn that a new kit has arrived.

Number of drugs per prescription form

Although the national treatment guideline recommends at least two drugs per diagnosed condition, in this study it was observed that nearly 70% of all patients were given a prescription form with 3-5 drugs (items). In all the three types of facilities, the average number of prescribed drugs (items) (\pm standard deviation) per form was higher than the number which was reported among hospital outpatients in Dar es Salaam (Massele and Mwaluko, 1994), 2.9 ± 0.83 and 2.4 ± 0.16 drugs respectively. The average number of drugs per prescription in this study was also larger than that of health centers and dispensaries in Dar es Salaam, 2.1 ± 0.5 and 1.9 ± 0.5 drugs respectively.

By wide margin, private hospitals appeared to give larger number of drugs per prescription than voluntary and public health facilities. In our study, the number of drugs (items) per prescription form for patients seen in private hospitals (3.4 ± 0.9) was much higher than voluntary (2.8 ± 0.8) and public hospitals (2.7 ± 0.7). The average number of drugs was also larger than the number reported from voluntary (2.6) and public hospitals (1.7) in Dar es Salaam (Kanji et al 1995).

Irrational prescribing of multiple drugs has also been reported in Coast region, Tanzania where more than four drugs were prescribed in private dispensaries, while in public dispensaries the number was 1-2 per prescription form (Ahmed et al 1996, Urassa 1994). Massele and Mwaluko have tried to explain why the average number of drugs per prescription is high in hospitals. The authors argued that the root cause of over prescribing practice is probably because those hospitals have a wider range of drugs compared with lower level of health facilities. The authors also cautioned that, large number of drugs per prescription could reflect symptomatic treatment following failure to make a correct diagnosis.

Overall, this pattern of irrational prescribing appears to be a wide spread problem in Tanzania, especially in private health facilities. One limitation is that we only measured the problem of over prescription with many drugs (items).

The study has also shown that there is inequity in prescribing habits among the 3 types of hospitals. As we ponder with this problem of irrational prescribing, it is also important to consider the nature and motive behind their habits. All these behaviors are geared towards profit making and increased income generation particularly in private than voluntary hospitals. If they do not sell drugs, some of the private health facilities would probably close down. On the otherhand, voluntary health facilities would continue to barely survive because they often get some donations of from abroad, but over prescription will persist because of shortage of competent medical assistants and rural medical aides.

Client Satisfaction

Generally patients seemed to have been satisfied with the quality of services based on perceived provider's technical competence, prescribing practices, and provider-client interactions. Technically, considering the dimensions of quality, only a few clients are qualified to judge the technical competence of service providers. Although clients can provide meaningful feedback on the other five elements, "courtesy bias" in interview situations makes measurement of quality from clients reports problematic. Similarly, although "Experts" may be better positioned to evaluate objectively the six elements, they cannot capture directly what the client perceives (Bertrand et al 1995).

Thus as a means of clarifying this issue, Bertrand et al (1995) have recommended the need of distinguishing between objectively measured standards of service and client's perceptions of quality of care. Services standards are a function of imports from the health facility which are controlled primarily by policy makers and the hospital management while clients perception of quality remain to be subjective. The linkage between the two is that services are made better, the end result would be more positive attitudes of the users, however measurement of one does not substitute for the measurement of the other.

In this study we reported that a quarter of the patients (25%) did not have access to drugs; being worse for acute (11%) compared with chronic illness patients (29%) Similarly patients seen at Government hospitals had limited access because 80% of them reported that they could not get their prescribed drugs. We did not find out why these patients could not get access to drugs. We could not dwell on to why drugs were not available. Was it because they were refused by a staff member who had a negative attitude towards patients? Was it because they had too many patients since the last stock of pharmaceuticals was received? Were the drugs out of stock either because of lack of funds or due to irrational prescribing?

The Government's policy for rational prescribing recommends that for each illness at least one or two drugs should be prescribed after correct diagnosis has been made. In this study, it was shown that three quarters of the patients with acute illness and a half with chronic illness were

given 3-5 drugs per form. The practice of over prescribing was worse in private and voluntary hospitals. From a policy perspective of quality, these observations suggest that standards for rational prescribing are not being maintained in various hospitals despite the fact that hospitals facilities have more adequately trained health manpower.

We note however, continuing education on rational prescribing was provided nationally through the essential drugs in early 1980s and since then there has not been a similar exercise. It is recommended that health providers in various hospitals, including public, private and voluntary be provided with continuing education on management of patients (taking a good history, doing physical examination, laboratory investigations and making a correct diagnosis) so that they can become better rational prescribers.

Because it was felt that clients perspective was the most important determinant of quality of health care services, we assessed, though subjectively, the level of client satisfaction based on different types of information given to them by the health provider. We asked clients whether they were told something about their diagnosis, management plan, use and side effects of drugs. In all the three types of hospitals more than 90% of subjects were given a diagnosis and were explained how their condition was going to be managed. Similarly 95% of the patients reported that they received adequate instructions about use of their prescribed drugs, the figure being 82% for patients attending treatment for the first time.

Although the degree of client's satisfaction was generally high for the majority of patients, we could not evaluate certain aspects of their satisfaction. For example, we could not verify the accuracy of their diagnoses or their management plan or the accuracy of information given about use of drugs, and their side effects. If one had put an expert in the consultation room probably our assessment would have been different and biased. So we did not use that methodology. The fact that 98% of patients responded that they were given adequate time to enable them to explain their complaints well is a reflection of how good were interpersonal relations between clients and health care providers. Surprisingly, however, there was no difference in levels of interpersonal relations among the three type of hospitals.

A recent evaluation of community satisfaction with primary health care services undertaken in Morogoro region of Tanzania, Gilson and colleagues (1990), reported that about one third of the respondents (35%) said they were not satisfied with the services received during their last visit to the local dispensary. Church dispensaries were favoured by their constant supply of drugs and workers with good attitudes while the negative side was the question of payment, and incompetent rural medical aides. The villages were not satisfied with the Government dispensaries because they lacked drugs and their Maternal and Child Health Aides were fond of using abusive language in addition to being unskilled (Gilson, Alilio and Heggenhougen 1994, p.771). Such deficiencies in quality of care appear to be quite common at all levels of the health care facilities in Tanzania, suggesting that there is need to address them so as to remove the negative attitude in the community. without addressing them it will be difficult to make headway with any additional policy changes related to cost sharing in health care and any other social services.

Waiting Time

Clients perceived waiting time was significantly different in the three types of health facilities. In public health facilities, perceived waiting time was almost twice that of private health facilities. The average waiting time in public, voluntary and private hospitals was 19.3 ± 25.2 minutes, 17.4 ± 12 minutes and 10.5 ± 15.8 minutes respectively. Nearly 70% of the clients reported that the waiting time was short (≤ 15 min) while a quarter (24%) reported it was normal (16-30 min) and 5% thought it was long (> 30 min). Comparing different types of health facilities, clients perceived waiting time was shortest in private health facilities (89%) followed by public (71%) and voluntary (60%).

This study did not try to understand the reasons why clients perceived waiting time was different in the three types of hospitals. However, one can only speculate the reasons which might have contributed to either longer or shorter waiting times. In hospitals where the average waiting time was reported to be short as was the case of private hospitals, it is probable that they had fewer patients queuing, or the providers were not taking enough time to do a physical examination. The other explanation is that the cases were so mild and simple that a provider would easily

or ask permission from another decision maker in the house or community. A half of the community subjects interviewed said they had to ask permission, mostly from head of household. However, there was no difference between Mara and Kilimanjaro regions.

One can not rule the problem of lack of incentives being a demotivator for improved efficiency, especially in public hospitals. The fact that the provider's salaries in public hospitals are so low makes provider in public hospital fail to appreciate the need to rush in handling patients. As a result, they often take their time, and appear not to be serious with their work. After all what do you tell the patients when there are no drugs or equipment to carry out routine and basic procedures? It is really amazing to see how clients get satisfied under such difficult conditions in public hospitals. Someone wakes up at five o'clock in the morning to go to hospital and he/she is given two minutes of consultation time after a lot of hustle in an overcrowded clinic! In private hospitals, one would probably rush so that can grab the money before the clients run away.

Consultation time

Generally, patient perceived consultation time was adequate and equitable among the three types of facilities. A study of outpatients by Abel Smith and Rawal (1992) tried to assess waiting time in Government and voluntary health facilities. The authors reported that the average waiting time at Government hospital was longer than voluntary hospitals, 177 and 105 minutes respectively.

In this study there was a fairly equitable client satisfaction with consultation time, information given about their diagnosis, about use of drugs and side effects between different types of health facilities. However the level of client satisfaction with treatment was significantly higher in private than voluntary or public health facilities. Such high degree of client satisfaction has been previously reported by Urassa et al (1994) and Ahmed et al (1996) and Kanji et al (1992).

Interpersonal relations

As a proxy of interpersonal relations patients were asked to give reasons for choice of various health facilities. 52% of the patients in voluntary compared to 24% in public and 26% in private

hospitals responded that the health workers were more polite. This suggests that in places where providers are more polite, there is a higher likelihood of getting better rapport and hence improved client - provider interaction.

Different catchment population may have different perspectives of interpersonal relations. For example when community subjects were interviewed to find out reasons for choice of a hospital they attended when they got sick in the previous 3 months, 20%, 27%, and 30% of those who went to public, voluntary and private hospitals mentioned that it was because their health workers were polite.

The only possible explanations for difference between the community and patients perceptions of health workers politeness in voluntary health facilities is that the community data provides information which includes experiences of subjects who have gained access to services over a 3 months period. On the otherhand clients data is not influenced by problems of recall bias.

In the light of the above discussions, it is recommended that continuing education should emphasize the importance of patient/doctor communication and also prescription habits. This should follow the standards which have been proven to be effective elsewhere for optimal functioning of hospital services.

User-charge and Mode of Payment

According to a review of recent experience on user charges for health care two principal functions served by user fees have been identified: They generate revenue from those patients who find the service to be worthwhile at the going price; and they direct patients who either can not pay, or who judge the service to be less desirable than some alternative to other sources of care (Creese 1990, Creese 1991).

Although patients paid an average of Tsp. 500, 2100 and 3200 for treatment obtained from public voluntary and private hospital, two thirds of the patients interviewed thought user-charge was moderately expensive. The average user charges for clients who felt that the charges were

expensive were, Tsp 2600, 5400, and 9500 for public, voluntary and private hospital respectively. This indicates the amount of user fee paid for treatment was lowest in public hospitals compared to voluntary and private hospitals. Despite the amounts paid, the majority of subjects who perceived that the user charge was expensive, had attended either public or voluntary hospitals. This suggests that patients attending treatment in public hospitals are extremely poor compared to patients who attend voluntary and private hospitals.

This information is also suggesting that there is a difference between willingness to pay, real payment, feelings of whether it is expensive or not and affording (ability) to pay. Therefore in deciding what amount of money should people pay for a given service, one parameter alone is not enough to decide. In addition, because people differ in value judgement it is just safe to make sure that there is a wide spectrum of alternatives so that people can sort out themselves according to their value judgement, willingness and ability to pay.

To assess how community subjects felt about the user charge for malaria treatment we asked them if they perceived it was cheap, average or expensive. Nearly a half of the community subjects (49.4%) felt it was rather expensive and two thirds claimed that they were not willing to pay more in order to make the services better. Although it is important to note that user charge may have more than one effect, in this study we did not find out the percentage of patients who would seek alternative source of care because they could not afford to pay their user charge or could not get an exemption. To be able to assess this, one would require a longitudinal type of study on health seeking behavior with repeated cross sectional surveys done in the same communities at shorter intervals of about 6 months so as to assess effect of introduction of user charges on their behavior.

The Ministry of Health's guidelines has provided a list of people to be exempted from paying user fees. These include mothers and children, the very poor, people with chronic diseases and patients suffering from epidemic diseases such as Meningitis and cholera. Although such exemptions are not meant to affect the above group of populations directly, a study done in Kenya has shown that utilization of MCH services also tend decline drastically with introduction

of user fees for other patients (Mbugua, Bloom and Segall, 1995). There is need to do a research to evaluate the impact of user charges on the vulnerable groups of population, including mothers and children, and the school age group.

Mode of payment and source money for payment

The majority of patients (93%) reported that they paid out of pocket after having sold either food crops, livestock, or after borrowing some money or getting assistance from relatives. The fact that they paid out of pocket put them at serious risk because they cannot be assured of having money for treatment throughout the year. Nearly 56% of subjects seemed to be able to pay user fees by selling crops or livestock and 37% depended on borrowing or getting assistance from relatives. This shows that immediately after harvesting people may be able to afford to pay for user fees because they can sell food crops or livestock. This source of income, however, is dependent on the climate and time which has elapsed since the last harvest Experience in many rural communities shows that immediately after harvest, prices of food crops in the market are relatively lower than during the planting season. This means that in order for one to get enough money, he/she has to sell a large quantity of post harvest crops to be able to earn enough money to cater for user fees and other basic necessities such as clothing and school fees for children. In most places, liquidity will be almost zero, if 6 months have passed since the last harvest because most of the harvested crops during the last season will have been finished.

The question is whether there should be two types of user charges, one for harvesting season and another one during the planting season? Our study was done immediately after short rains (November) suggesting that the state of food crops and livestock was relatively better compared to if one had done the survey in the months of August to October. In one recent study, Mushi reported 76.7% of the subject depended on somebody else to pay for their user fees and only 23.3% were able to pay from their own pockets. These figures are different from what we have shown because in our study nearly 95% of subjects reported that they paid out of pocket and those who depended on relatives or borrowing were only 37% as reported earlier. If one examines the source of income for patients who went to private hospitals, 54% had either borrowed money or got assistance from relatives, suggesting that nearly half the people can not

afford to pay on their own. Now, supposing there is more than one member of the family sick? This will certainly result in some casualties.

Willingness to pay

In health facilities where drugs were readily available, people were willing to pay a reasonable charge which was slightly less than the average being paid so far. However, for public hospitals they were not willing to volunteer anything more than what has already been set by the Government. When they were asked what they would be willing to pay given that some of the subjects had responded that the amount they had paid was expensive, an average of Tsp 1500 and 3500 was volunteered for voluntary and private hospitals and none for public health facilities. What this suggests is that in voluntary and private health facilities where drugs were readily available there is need to have some regulation of user charges. In the same token, people were willing to pay reasonable charges but for public hospitals they were not willing to volunteer anything more want to see improvement in the quality of services and not only mere consultation.

These findings are in conformity with a recent report which examined the impact of cost sharing in health services in Tanzania focussing on quality, affordability and accessibility (Mushi 1995). The author reported that nearly three quarters of subjects were not able ready to pay more than the current user fees unless substantial improvements in drug supply, attitude of providers, and the manner in which patients were handled in various health facilities. He cautioned there should not be an increase of user charges any more because it would be negatively taken by the community and the effect would be similar in all types of facilities.

Referral system and pricing

There is no clear referral system that is in place among public, voluntary and private hospitals. This suggests that there is no clear superiority of health services of one category of health facility compared to another. Pricing system also did not seem to take to consideration the referral status of the patient because all three types of hospitals operate independently of each other and that there is no agreement of honouring (respecting) referrals from one another;

therefore patients are also treated as new attendants in every place.

Among self referral patients, many had shifted from one type of service to another, however, voluntary hospitals had received the highest number of patients from all other types of health facilities. The shifting from public to private health facilities might be due to non-availability of drugs in public health facilities while those who shifted from public to private and voluntary health facilities the reason could be due to unregulated high user charge.

Unless there is clear policy to make sure either government hospitals are subsidized or assisted in certain issues (e.g. tax exemptions in voluntary and private), there will be no incentive to share patients and therefore the issue of referral system will remain unattended (see also four group discussions).

Exemption System

This study showed that some form of exemption system existed only in public and in voluntary hospitals. In public hospital, this system is still on trial as cost sharing exercise was only introduced recently in Government hospitals compared to voluntary hospitals. Public hospitals tend to follow the Ministry of Health's (MOHs) guidelines which are considerably fair but their implementation will require not only collection of fees or exemption but the revamping of the whole system of managing the income generated so that it can result in improvement of hospital services and therefore encourage clients to contribute more.

The current exemption system is not yet specific enough to pick-up poor people because the amount charged in public is very low compared to the user charges in voluntary and private hospitals. There are also a lot of management and administrative matters to be addressed locally so as to be able to rule out without any doubt people who can not really pay from those that are just not willing to pay because they know there are no drugs or because they are not sure if the services, including X-Rays and laboratory investigations, can be obtained from public hospital.

Exemption system in voluntary hospital seems to work better than in public hospitals because the system is decentralized and it takes into consideration the local situation, rather than using the nationally set standards of public hospital criterion. In one voluntary hospital, focus group discussions and interviews showed that no patient had been refused treatment because he/she could not pay but at the same time they were able to run their hospital with 65% of the budget coming from cost-sharing exercises. This shows that there are good examples from voluntary hospitals which can be adopted into public health system.

On the whole, there was no exemption system in private hospitals although some hospital administrators could exempt some patients if they completely failed to pay fees after several follow-ups.

One of the issues which we did not evaluate is the way patients who can't pay are being treated. Are they given less attention when they seek care from various types of facilities? Similarly we were limited by the methodology in that we could not examine how rigorous or flexible is the system in discriminating the poor when the majority of patients are poor compared to developed countries.

An aggressive "means testing" of patients in terms of their ability to pay is reported to be practiced at many mission clinics in Ghana, showing that discriminatory fee systems to protect the genuinely poor can be implemented. In a study done in Ghana Creese has indicated that despite charged higher fees which sustained a policy of gradual fee increases, mission clinics managed to have increased demand (attendances) for health care because of perceived higher quality of care compared to Government health facilities. Hussein (1995) has shown that with introduction of user fees there was a rapid decline in utilization of health care services Dar es Salaam and this demand diversionary effect is not simply due to frivolous utilization. In other areas it has been shown that patients tend to shift from public to voluntary health facilities where the quality of care, according to clients perspective, appear to be better and when they discover this is not the case they resort to other alternative sources of care or they decide not to express demand at all.

Community involvement in exemption system

Whilst community financing has been shown to have the potential for extending activities in the health sector in developing countries, limitations have been identified with both the level and the long term stability of revenue, and the ability of community financing to help with generation of foreign exchange for the health sector. In addition other sources of financing to care for supervision, logistical support, referral linkages and evaluation will almost always be required (Creese, 1990).

One of the more serious limitations of community financing mechanisms, however, is their inability to bring about greater equity in the sense that community financing tends to exacerbate existing inequalities within communities. Based on discussion with officials of the Ministry of health who are currently implementing the CHF project in Igunga district, there is also a need to establish a good set of health indicators so as to be able to evaluate the impact of community financing. Taking into consideration the difficulties of measuring change in health and development in places where the use of health management information system is not in place, assessment of equity and whether resources are being most cost effectively deployed or consumed should be established.

The findings of this study showed that community understanding and exemption criteria were similar to all people who had attended any of the three types of hospitals. Nearly 99% of people in the community said they were not involved in exemption system. It is also true that public exemption system was nationally decided and uniformly used in every region and therefore the respective local communities were not involved in criteria for exemption.

Nevertheless, to supplement government criteria, people who do not meet the national criteria, but they still need an exemption they have to produce a letter of recommendation from village leaders. Such letters from village leaders/Community leaders seemed to be a fair way of getting community involvement if one assumes that community leaders represent community consensus.

In voluntary hospitals which are commonly inclined to religious organizations, community and religions leaders are supposed to assist in providing information about who to exempt if the hospital social worker fails to decide whether to exempt the client or not.

In private hospitals, a community can only force a decision by refusing to attend the hospital, but otherwise there is not a direct representation. Market forces which involves demand , supply and price operates in private hospitals.

7. CONCLUSION

In conclusion, the study has shown that based on distance and time taken to travel to hospital, there was equity of access to health care services in public, voluntary and private hospitals regardless of background characteristics. Perceived client satisfaction was very high based on waiting and consultation time, provider-client interaction and interpersonal relations and perceived technical competence. Short distance, availability of drugs, good service and health worker's politeness were critical factors influencing choice of hospitals by patients and the community. Of concern is that only 20% of clients in public hospitals could get their drugs while in private and voluntary hospitals they were plentiful and they were irrationally prescribed.

It has also been shown that when alternative sources of health care services are readily available, patients tend to sort themselves out according to their needs and economic power. The only precondition is that those services should be accessible geographically and that the prescribed drugs should be readily available.

8. RECOMMENDATIONS

1. To minimize inequity of access to health care services, it is recommended that the Ministry of Prime Minister's Office, Ministry of Health, Ministry of Community Development, Women and Children and Ministry of Local Government should work out a mechanism of mobilizing community involvement so as to make sure that all public health facilities in the two regions have an adequate supply of drugs available because this was the main reason for choosing private and voluntary health services. Through community involvement, people will be able to understand the problem, identify alternative solutions, and be able plan, implement, monitor and evaluate the success of their own inputs towards maintaining equity and better health care services in their regions.

2. The fact that the average number of prescribed drugs per form was extraordinarily high, being worst in private, followed by voluntary and public hospitals, it is recommended that the national treatment guidelines be re-visited and retraining of providers on the importance of making correct diagnosis be emphasized. Health providers in all the three types of hospitals should also receive continuing education on cost sharing; pricing and referral systems; interpersonal relations; irrational prescribing and community involvement in primary health care. Through workshops and seminars an incentive mechanism will be established to encourage transfer of patients from either public, voluntary and private hospitals freely. In the meantime, waiver of some of the taxes in voluntary or private hospitals may be necessary so as to get them to implement some of the public responsibilities.

3. The fact that no single measure could be used to provide a full picture of equity in access to health care, it recommended that in assessing equity in health care services different indicators have to be considered so as to capture both technical competence and perceived client satisfaction. Linkage between equity and quality of care should be validated and where possible the three types of health facilities be covered.

4. It also recommended that further research be done to examine the effect of cost sharing on vulnerable groups of population, including mothers and children, and the school age group.

5. Regarding the issue of cost of care and mode of payment, the price of services should consider cost of services and also ability for patient to pay. Because ability to pay is varied, it is recommended that a form of insurance system be established so as to protect the 93% of patients who are at risk of paying from their pocket whenever they fall sick. These people are at risk because of lack of liquidity when they get sick at times when they do not have savings from harvested crops or previously sold live stock or someone to borrow from.

6. The current exemption system should be improved by incorporating some of voluntary hospital experiences like (producing letter of recommendation for exemption not only from community or religious leaders but also from any other registered organizations which can give an adequate information about the client's economic status and inability to pay user fees. In addition, the question of who should decide on who to exempt should be decentralized because people at the local level are the ones who know best the real situation of their people.

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Annex I.

BAMAKO INITIATIVE OPERATION PROJECT (BIORP)
HEALTH WORKERS FOCUS GROUP DISCUSSIONS RESULTS.

| Theme | Public | Voluntary | Private |
|---|--|---|--|
| <p>Factors which prevent people from using medical services in this hospital (Mara)</p> | <p>Diseases like jaundice, convulsions, inflamed uvula "Kilimi", "Plastic teeth" "Meno ya Nylon" people take their patients to traditional healers. The other factor is poor economic condition of families with many children. "Most men are polygamous and they don't take care of their families". Distance and lack of transport was other factors mentioned to affect utilization of services in this hospital.</p> | <p>The most important reason is due to social-cultural beliefs. People use traditional medicine for many types of diseases. Another reason is low socio-economic status and therefore can not pay for health services. Distance is not an important factor for many people.</p> | <p>Many men do not take care of their families "even if many men have cattle they can not sell a cow in order to pay for the health services". Illness like convulsion are taken to traditional healers and lack of transport and long distance from rural villages are also contributing factors for not using this facility.</p> |

(Kilimanjaro)

- Sometimes it is difficult for them to get letter of exemption from a village chairman (leader) because even the leader themselves are poor.

- People have no money because when they sell their crops they don't get money immediately.

There are few who can not pay because they are very poor economically.

We can only say distance for those who are far . For those who can not pay there is what we call Machame patients funds since 1985.

These funds are for patients who can not pay for health care service after been investigated by hospital social worker.

The funds comes from donations from the church and from abroad.

"Money of course." Those who can not pay do not come to these hospital. Our hospital is only two years old and many people do not know about it and therefore they don't come.

What type of health care services people are supposed to pay in this hospital?
(Mara)

To see the doctor, drugs, admission and investigations according to MOH guidelines for implementation of cost sharing.

All services i.e., investigations, drugs, etc., this is because all drugs and equipment are bought with money and we don't get donations from abroad nowadays.

All services given here are for fees. salaries, drugs etc, are covered by user charge like investigations, drugs admissions etc.

(Kilimanjaro)

We follow Ministry of health guidelines for cost sharing. Type of services and prices are displayed in different notes boards.

Patients pay for every service but the prices are cheaper and sometimes below government estimated prices for private health services.

Patients pay for every thing here.

Say something about the cost of health care services in this hospital?

(Mara)

Cost of care generally is very cheap when compared to voluntary , private hospitals and in drug shops even patient say so. This is because government give subsidies and drugs are not sold for profit.

Cost of care is moderate because we need money to pay for health workers salaries and drugs.

Cost of services are of average if you consider the cost of drugs and salaries for the workers, which you we pay and this come from user fees.

(Kilimanjaro)

-Majority of patients accept prices here without any complaint. Complaints start when some of the services e.g. drugs or X-ray are not available at that particular time.

-People are used to pay for health services since colonial time . There has been no much complaints. Donations from abroad have been decreasing slowly and therefore people have been encouraged to increase amount of cost sharing gradually." In 1993, 65% of the hospital budget came from patient's cost sharing exercise"

Here there is no cost sharing. Patient pay full cost of health care as we need profit to pay taxes and salaries for the workers.

How do people
who are referred
pay for their
treatment?
(Mara)

Patients who come
here they pay as
new patients and if
they are referred to
the higher level we
make sure they pay
their debts first.
We only write the
treatment he
receive and not the
money he paid.

All patients start
to pay afresh. If
they are to be
referred they
have to pay their
debts first.
No exceptions.

We consider
any patient as a
new patient and
we don't
consider
whether the
patient has paid
where he/she
comes from.
The only thing
we do is to
treat the patient
on credit and
follow up until
she/he pays the
whole bill.
No exemption

(Kilimanjaro)

Patients pay as
new attendants and
we don't consider
how much they
have paid in
previous health
facilities.

There are
considered as
first attendant
patients.

We don't
consider
payment paid
somewhere
else.

How do you
handle patients
who can not pay
for their
treatment
charges? (Mara)

If a patient has
been treated and
can not pay he/she
is just left free!!

At the beginning
there was a
special funds for
poor people who
can not pay.
Poor people
were exempted
to pay for
diagnosis and
investigations
but should pay
for drugs and if
they can not
afford then their
relatives are
employed
temporarily by
the hospital to
cover the drug
costs.

Medical officer
in-charge is the
one who can
offer exemption
for the person
who can not
pay.
Those with
chronic illness
and poor are
exempted to
pay.

If the patient
died relatives
are exempted to
pay for the
treatment!!

(Kilimanjaro)

-His/her relative will be requested to go and get a letter of exemption from their village leaders.

-Also because hospital do not provide food you could see what type of food is brought by his relative and this can give a clue whether the patient is poor or not.

1. Has to provide a letter from the village or religious leader to say that he/she can not pay in order to be able to follow up debts!!

2. Health workers might volunteer to bail/guarantee that, the patient will pay the bills after treatment when he gets the means.

3. No body has been denied health care services because he/she doesn't have money.

They are advised to attend government hospitals.

What do you
advise as a way
to identify poor
people who can
not pay for the
treatment?
(Mara)

We look on
patient's health
status and we
insist to get a
letter from
religious leader
or village leader
to certify that
the patient can
not pay for the
hospital services.

We those who
can pay should
pay more in
order to cover
those who can
not pay.
Government
should try to
subsidies some
fees for poor
people.
However, this
is private
hospital people
should pay. We
do not think of
any exemption
mechanism.

(Kilimanjaro)

We ask questions
to know his
income like?

-How many
children do you
have?

-Where are those
children?

-Do they work or
study?

-What is the size
of the farm ?

-Do you have a
letter from village
leader or religious
leader saying that
you can not pay
for the services?

-Their physical
appearance will
tell you many
things
ill health,
malnourishment,
type of clothes
put on etc.
-They are told if
they need
exemption,
should come
with a letter
from a village
leader or
religious leader
of the nearest
church.

-Sometimes if
patient
appearance did
not convince us,
even health
workers are sent
to explore
whether this
people are real
poor or not.

No, because
everybody who
comes here
knows exactly
he/she has to
pay and
therefore
prepared.

Annex II**Objectives:**

To examine and compare pricing system for referral and non-referral patients with similar medical conditions in three categories of hospitals.

To evaluate the existing exemption system and how it isolates the real indigent and also its constraints.

To assess community involvement in determining exemption system in three categories of hospitals.

Results and discussions:**Objective 1.**

In government hospitals, cost of treatment for referral patients was reported to be the same as for a new attendance. If a patient is referred to a higher level, usually they would be asked to pay their debts first, then they would be given their referral letter (H/W, FGD Tarime and Mawenzi). One health worker also mentioned that, "We only write the diagnosis and treatment which the client has received on the referral letter and not the amount of money which was paid" (H/W, FGD Tarime). In voluntary hospitals all patients were treated equally regardless of whether they were referred or not and therefore they paid the same charge for similar illness and treatment (H/W, FGD, Shirati and Machame). In private hospitals it was also the same case as in public and voluntary hospitals. Referred patients were not exempted from paying a user charge similar to what other non-referred patients would pay (H/W FGD, SIIMA).

Objective 2.

Focus group discussions with health workers revealed that, in all government hospitals exemption system was implemented according to the Ministry of Health's guidelines. Anyone to be exempted had to have a letter of recommendation from the local village leader and then

he/she would be assessed by a social worker in the hospital. In voluntary hospitals, they had a similar exemption mechanism which was established a long time ago, compared to the recently introduced government system. At the time of the study, there was a social worker who dealt with counseling of patients as well as evaluating those who could not pay for the health care services. The criteria for exemption was based on the patient's appearance in relation to his/her nutritional status, physical fitness, and type of clothes he/she wore in comparison with others who did not seek exemptions. " For those who are admitted you can observe type of relatives who come to visit him/her and variety of foods which are brought to the patient" (H/W FGD, Shirati). To be exempted, a patient had to satisfy the social worker that s/he is unable to pay based on the above criteria and also patient had to produce a letter of recommendation for exemption from his/her religious or village leaders." Sometimes, even health workers are sent to investigate the patient's residence to prove if they are really poor to a level of being unable to pay for the services". "For those who can not pay full price, their relatives sometimes are given a temporary job, like cutting hospital grass or even washing patient's linen and their labor pays for the patient's debts" (H/W , FGD, Machame and Shirati). In private hospitals, there were no exemptions ". Everybody who comes here knows very well that he/she has to pay and therefore they are prepared to pay user fees for health care services. Those who can not pay full fees, in order to receive full treatment, they have to be bailed out by a health worker who knows the patient and can follow-up the individual until all the debts are settled (H/W, FGD SIIMA and Mwera).

Objective 3.

The community is certainly involved in determining exemptions from the mere fact that, there must be a letter of recommendation to support that a patient is unable to pay user fees for health care services, from a community leader who could be either a village chairman or religious leader. These leaders are considered to have enough knowledge on patient's ability to afford to pay not only for health services but even other developmental or social activities in the village. The criteria used by these leaders are not explicit and therefore not uniform. One health worker said "sometimes it is difficult to get a letter of recommendation from a village chairman because even himself is poor". (H/W, FGD, Mawenzi). This shows that the decision of who to

exempt in the community depends not only on the individual patient's ability to pay but also on his/her relatives. Therefore, this makes it extremely difficult to have uniform criteria.

Policy implication- Exemptions.

It is difficult to come out with single objective measure of patient's ability to pay for user fees due to variation in the sources of income in different parts of the country. Further more, many social cultural settings of the Tanzanian population suggest that any illness, birth, or death that might occur in any household is regarded as family or community affair. The ability or inability of an individual to pay for the user fees depends on his/her family's ability or the degree of relationship someone has with his/her family or community. These factors make the village or religious leader to have much broader consideration than that of social workers at the hospital which consider patient condition alone. Therefore a combination of both criteria is considered reasonable in facilitating the decision to grant an exemption for non-emergency condition in public and voluntary hospitals.