Chapter 6

Health Financing

6. HEALTH FINANCING

6.1 OVERVIEW OF HEALTH FINANCING IN KENYA

The primary objective of any health financing component of the JICA health project should be to increase the resources available to the health system. Seen in this perspective, health financing is a set of activities in support of others that more directly affect health status and the operation of the health system.

This report has benefited from many other studies on health financing that have been carried out in Kenya, which has been a leader in this field since the early 1980's. The Kenyan emphasis has been on increasing resources through private participation in financing the cost of government health services. Programs of user fees and insurance were established in Kenya well before the rest of sub-Saharan Africa. Kenya has also been a leader in the development of health policy reforms to cope with an environment of limited resources, and has also produced several health economists who have made important contributions to this field.

Three main external donors have promoted much of the work in this field. USAID has sponsored the Health Financing and Sustainability Project and its successor APHIA, which, through the HCF Secretariat, has implemented cost-sharing at MoH health centres and hospitals and the Kenyatta National Hospital. Documentation of these most of these activities is available. The World Bank has carried out fewer but important studies on financing and resource allocation in the health sector, as well as valuable background data on poverty and the overall economic outlook for Kenya. DANIDA has taken the lead in Health Sector Policy Reform, supporting development of the Health Policy Implementation Plan, and committments to reforming the procurement and distribution system for essential drugs and supplies.

Most of the existing body of information concerns national-level conditions, the situation in specific districts other than the JICA Study Areas, and central MoH policy issues. This section of the Report is based on field investigations in the Study Area carried out by the JICA Study Team, and on the substantial body of published and unpublished research reports and other documents related to health financing in Kenya.

6.1.1 Main Planning Issues

A Framework for the direction of Health Sector Reforms has been carefully developed by the Government of Kenya. The JICA project study should reflect and support these policy reform goals as far as possible.

The public health system is underfunded, and the likelihood of increasing the tax-based government subsidy for the system is small. Emphasis is now placed in increasing funding from private sources, with official policy clearly supporting expansion of user fees and health insurance.

Yet, at the same time, part of the existing financing is wasted because of the inefficient allocation and utilisation of resources, at the level of the entire health system and on individual facilities and programs. Compared with the more efficient and higher quality NGO and Provincial hospitals in Kenya, government district hospitals spend relatively more on personnel, specifically Enrolled Nurses, to produce a similar level of patient care, and much less on such critical inputs as maintenance, transport, drugs, and supplies.

Rural health facilities are less well financed than district and provincial hospitals. The result is a very low quality of services provided at health centres and dispensaries. Most are understaffed in critical categories such as Clinical Officers. Patients recognise this low quality and tend to underutilise the peripheral facilities, reducing their potential for treating conditions that could be treated effectively in early stages and at low cost.

District and provincial hospitals have become overcrowded, and both the quality of care provided and their physical deterioration reflects this. The cost of treatment is relatively higher than at the peripheral facilities, both for the health system and for the patient.

Under these conditions, the hope of increasing private participation through user charges becomes less possible. There is evidence of ability to pay higher charges than presently levied, but little willingness to pay for poor quality. NGO health facilities have succeeded in becoming nearly self-sustaining through user charges because of the better quality of care they provide. The cost-sharing system has the potential to fill much of the present financing gap if collection rates and fee levels are increased, but this major improvements in service quality will be necessary.

The issue of equity in cost-sharing has been recognised at the policy level, but has not adequately been dealt with in the actual service environment. Until this is done, the important policy goal of access to health care by all Kenyans will not be achieved. Decentralisation of authority and responsibility is expected to result in improvements in management and decision-making, which can improve efficiency and quality at the district level in a sustainable manner. This should include decentralised decisions on such issues as pricing, waivers and exemptions.

Community financing efforts have evolved independently of the official cost-sharing program, and need to be better coordinated with it. There are many lessons to be learned from their experience, both for sustainability and for improving health status at community level. The same can be said of mission hospital pricing policies Both of these exist in the JICA Study Area, and could be areas in which innovative approaches, including prepayment schemes and community pharmacies, could be tried.

The level of interest, activity, and capability for health sector reform at the districts is far below that of the central level, which benefits from intensive donor inputs in the form of training and technical assistance. The authority to manage resources, especially the large amounts represented by present staff costs, is now rather beyond even the imagination, let alone the ability, of district managers. It will be necessary to transfer this capacity to the districts through continuing education and training of DHMTs and DHMBs. A system of coordinating central-level training and policy development with the needs of the districts is also necessary.

The conclusions that follow from this analysis are based on existing research on Kenya as a whole and specific findings of the JICA Study Team in the Study Area. They are concentrated on rational and achievable ways and means for making the future district-level health systems more sustainable. It is not expected that the JICA Project will be directly involved in this, apart from a possible general advisory capacity. It will become the primary responsibility of the future district-level management teams, however mandated, to manage available resources in order to produce the maximum impact on the population's health status. The recommendations will therefore be the basis for DHMT management strategies, and also define the management training requirements for the continuing education component.

6.2 HEALTH SECTOR REFORM

Kenya leads the East African region (Eritrea, Ethiopia, Kenya, Tanzania, and Uganda) in several important indicators, (unfortunately) including population growth. The table below compares Kenya with the average figures for the Eastern Africa Region (EA) and the sub-Saharan Region (SSA)

Table 6.1 Cross-country comparisons of health data

	Kenya	Average, EA region	Average, SSA region
Life expectancy at birth, 1993	58	50	52
Infant Mortality Rate, 1993	61	99	93
Child Mortality Rate, 1993	94	171	172
Average Population Growth, 1980-1993	3.3%	2.9%	2.9%
Total Fertility Rate, 1990	5.2	6.4	6.2
Maternal Mortality Rate, 1988	170	719	584

Source: World Bank, Ref. 42

Kenya's Health Policy Framework has clearly defined the overall goal of health sector policy reform as:

> **"to promote and improve the health status of all Kenyans through the deliberate restructuring of the health sector to make all health services more effective, accessible, and affordable".**

Six strategic priorities have been adopted to support this goal:

- **ensuring the equitable [geographic] allocation of government resources to reduce disparities in health status;**
- **increasing the cost-effectiveness of resource allocation and use;**
- **continuing to manage population growth;**
- **enhancing the regulatory role of government in all aspects of health care provision;**
- **creating an enabling environment for increased private sector and community involvement in health service provision and finance; and,**
- **increasing and diversifying per capita financial flows to the health sector.**

6.2.1 Current Financing Sources and Future Prospects

The rapid expansion of health services and facilities throughout Kenya since independence have been largely financed through the tax-based government budget. As the costs of the ever-more numerous facilities and personnel have increased, so have the restraints on public spending in general. While the government budget increased as a proportion of Gross Domestic Product through most of the 1970's and 1980's, the increasing demands of other sectors, notably education and the "productive sectors" resulted in health receiving a smaller share of a shrinking government budget. This effect combined with rapid population growth, external economic factors affecting the terms of trade, inflation of 10% to over 20% per year, and the devaluation of the Kenyan shilling, so that in real terms per capita MoH total recurrent and development expenditure declined from a high of over US$10 in 1980/81 to about $3 in 1993/94. Since 1994 there have been sharp increases, with total MoH expenditures standing at around 3% of GDP, over 9.5% of total

government expenditures, and levelling off at about $6.20 per capita (Ref. 9). The share of government recurrent expenditure on health is now at its highest level in two decades and is projected to rise to 9.8% in 1998/99. Most of this spending is recurrent costs, of which the largest part is the cost of personnel.

When adjusted for Purchasing Power Parity, Kenya's total health expenditure of $US 14.77 per capita is equal to US$ 20.98, of which $15.13 goes to curative care, $4.44 to preventive care, and $1.41 to community programs. Given Kenya's relative affluence, it is surprising that this is not the highest figure in the region, but it is overshadowed by Uganda ($33.31) due to high level of donor support and a much higher level of private expenditures, and by Tanzania ($24.58) due to a high level of donor support. In terms of the breakdown between community, preventive, and curative spending, Kenya spends a slightly higher percentage of total expenditures from all sources on curative than the regional average.

Table 6.2 Health Expenditures from all sources as a percentage of GDP (1994 data).

Source of Funds	Kenya	Average, EA region
Government (a)	1.3	1.7
Donor	0.4	1.1
Private	0.8	2
Total	2.5	4.8
(a) as % of government spending	3.8	5
US dollars per capita total spending	$7.79	$5.76
% Community	7.7	9.6
% Preventive	20.2	22
% Curative	72.1	68.4

Source: World Bank, Ref. 42

This comparison suggests that Kenya benefits relatively less from donor support to the health sector than neighbouring countries, and private expenditures on health are significantly lower. It therefore appears that donor contributions to Kenya's health sector are relatively low, and also that there would be room for increased cost-sharing. Private spending (households' out-of-pocket spending and locally-funded NGOs) accounts for about 40% of health expenditures in the EA region, despite the fact that all five countries maintain networks of government facilities which ostensibly provide free or very inexpensive health services. In Kenya, the percentage of total spending by households is closer to 30% (Ref. 42). These ratios also show that government is now providing 52% of total health expenditures, compared with a regional average of 35%.

Given that the Gok has recently succeeded in shielding health expenditures from reductions, and in fact has increased its share of the total recurrent budget from 8.2% to 9.5% in recent years, and given the fact that recent increases have been at the expense of other sectors which are always in competition for funding, it is unlikely that this can be further increased, and may even see an absolute fall as the effects of the recent drought, floods, and sharp drop in tourism are felt on tax revenues. The currently high government share of total health expenditures therefore argue for increased private and donor participation.

Donor contributions, while largely intended for capital investments, figure significantly in MoH recurrent expenditures in the areas of essential drugs, immunisation, family planning, and HIV/AIDS control. As a result of donor inputs, real expenditure on Rural Health Services and P/PHC has been rising. The largest donors to the health sector from 1992 to 1996 were IDA (22%), USA (19%), local NGO support (19%), followed by Sweden, Japan, Finland, and Denmark (Ref. 40).

In the Study Area, significant recurrent inputs have been made recently to PHC by IFAD (FAO), which is ending in the coming fiscal year, and by World Bank in the area of HIV/AIDS. Donor coordination has been a problem, as illustrated by the preceding, in which there has been some duplication of activities.

The overall trend in donor contributions in Africa and in Kenya is downward. Donor assistance may have passed its zenith a few years ago, as donors have become disillusioned with inefficiencies and corruption that cause much of their own taxpayers' money to be wasted. Some major donors are reluctant to commit to funding certain critical programs next fiscal year. Mission and NGO funds are also tightly stretched.

Even with donor support, the increasing demands of the health sector will further constrain the MoH's budget and reduce the ability of the Gok to expand such critical programs as disease prevention and to continue the reductions in child and adult mortality seen over the last few decades. This leaves the Kenyan households' private resources, and improved efficiency, as the most likely possible source of increased revenues.

6.2.2 The Health Sector Reform Agenda

Taking these major constraints and other relevant facts into account, the Gok, with the assistance and guidance of several major donors, has formulated the current Agenda for Reform in the health sector, drawing from the strategies listed earlier. In summary form, this agenda includes these main activities:

Strengthening the central public policy role of the MoH in all matters pertaining to health. This will include all policy development, elaboration, and implementation, specifically:

expansion of health services through regulatory measures that encourage the growth of private, mission and NGO sectors,

improved equity, with measures for cross-subsidisation of poor districts to be spelled out; and,

quality assurance through statutory and management inspections with the aim of maximising efficiency commensurate with the investments made

Adopting an explicit strategy to reduce the burden of disease among the Kenyan population. This will involve reducing the demand for curative services and to free more financial and other resources for public health interventions and primary health care.

Curative care expenditures will be contained and targeted. Projected increases in demand will not be met through increases in MoH services, but through increases in private, mission, and NGO care. The MoH should over the next decade (i.e., to 2004) decrease its share of inpatient services from about 50% to 40% and its share of outpatient care from 40% to 30%. MoH curative care will be focussed on target groups such as mothers and children, those unable to pay for basic services and patients with communicable diseases.

The MoH will intensify and expand the coverage of preventive and promotive health interventions, and commit new resources preferentially to these.

Further decentralisation of planning, management, and resource creation, control and use to the districts

A National Policy concerning decentralisation in the health sector will be adopted, including budgetary decisions (possibly excluding salaries).

Increased opportunity for district inputs into policy dialogue.

Decentralisation of management systems other than those functions that will remain centralised (such as drug procurement and basic training). The current needs-based approach to district planning, drawing on local "wish lists", will shift to a resource-based model. Realistic budgets will be produced that reflect national strategies adjusted to local conditions and requirements. Financial management systems will be put in place to facilitate this and to ensure transparency in all transactions.

The provinces, through strengthened Provincial Health Management Teams, will assume certain roles which were the responsibility of the central MoH, including monitoring performance, management and financial audit, continuing education and on-the-job-training, and operational research.

Roles of District Health Management Teams will be expanded from overseeing only cost-sharing, and Hospital Management Boards will be formed to manage hospitals.

The technical resources (tools, staff, transport, training, etc) will be provided to Health Centres in order to improve their functional role in the referral system.

The Five-Year Plan for Financing Health Care in Kenya will be fully implemented, including

increased public funding for primary and preventive (P/PHC) services, increasing from 20% to 30% of recurrent expenditures, achieved through preferential allocation of central budget increases and district level user fee revenue to P/PHC

increased MoH revenue generation, with FIF (cost-sharing) revenue to increase from the current 7% to 30% of non-staff recurrent expenditures. This will be accomplished through improved collection efficiency, periodic fee increases and control of exemptions.

a longer-term option under consideration is the provision of block grants from Government to the districts. District level planners and managers would have the option of restructuring health services in a manner that best suits local circumstances and the levels of resources they are allocated and can raise locally.

Shifting part of the financial burden of curative care from the MoH budget to insurance schemes, meaning primarily reform of the National Hospital Insurance Fund policies and operations, encouraging private insurance schemes and increasing community financing efforts.

Further reduction in the rate of construction of new MoH facilities, and a focus on consolidation, rehabilitation and maintenance of existing ones based on need and cost-effectiveness in delivering health care.

increasing the MoH's resources for maintaining and repairing its facilities and equipment

Reorienting, retraining and redeploying health manpower to meet manpower demand projections and resource availability.

priority to be given the peripheral dispensaries and health centres, in order to reduce the workload at the hospitals.

clear norms for district manpower allocation will be set

District Health Management Teams will be given greater authority on personnel issues, including posting, transfers and staff discipline.

Prevention and control of HIV/AIDS and STDs to be given high priority.

Adoption and implementation of a National Drug Policy, to improve quality drug availability in MoH facilities and their affordability to the population in general.

6.3 IMPLEMENTING THE REFORM AGENDA: REALLOCATING AND MOBILIZING RESOURCES

6.3.1 Central Versus District level Interventions

Carrying out the Reform policy and Agenda will be a long and difficult process, as has already been demonstrated by the complex, but ultimately successful, history of cost-sharing, the cornerstone of the policy. Progress in decentralisation, the other main component, is likely to be slowed by political intervention in reaction to changes in the power structure of the health system, a shortage of resources needed to implement new or changed systems, and the general unpredictability of life in the rural areas of Kenya.

It should be assumed that the Study aims, to fully support the health sector reform agenda, using several types of interventions simultaneously. These might include training and direct assistance to District Health Management Teams in district-level management and planning, strengthening the health infrastructure, pilot-testing alternative strategies within the overall policy context, operational research, and community-level health and intersectoral activities. In the remaining part of this section, greater detail will be given on those aspects of health financing which the future JICA district-level interventions are most likely to influence, and correspondingly less to those which entail decisions to be made at the central level. This is not to imply that JICA should not support such central-level decisions as NHIF reform, the reform of the drug procurement system, the granting of autonomous status and block grants to provincial hospitals, or the possible eventual change to a system of block grants to districts, but in all likelihood most project resources will be targeted at the district-level activities.

6.3.2 Improving Health Status Through Reallocation of Resources

Resource allocation may at first appear to be an issue that is largely decided at the central level, but this is not necessarily true. As decentralisation proceeds and District Health Boards gain capability and influence, more and more resource allocation issues can be decided at this level. This section begins with a theoretical analysis of one aspect of the resource allocation policy agenda, the shift from curative to cost-effective P/PHC.

Optimising resource allocation is a conservative approach to achieving adequate financing of the health sector. It means that available government and private funds are used in the most effective and efficient way possible, and it also means that Government is not constantly dependent on the generosity of external donors to maintain the status quo. At the same time, donors are positively influenced by such efforts and may be inclined to provide more financing for expansion and development.

In Kenya there is awareness of the need, if not the political will, to identify constraints, set priorities, and adopt effective strategies. This implies making hard decisions about allocating scarce resources among different activities or alternative approaches to solving the same health problem. Having reliable data about the costs of existing services is a critical requirement for the task at hand. One purpose of this Study component is to

provide a basic level of such information in the Study Area and to indicate areas that will require more detailed analysis.

While mobilising private resources to supplement government and donor funds has to date been the focus of implementing the Reform Agenda, better resource allocation and more efficient use of existing resources will be at least as important for securing a significant improvement in health status. There is a need to correct the present imbalance in resource allocation, the most important of which is the preponderance of the MoH budget that supports curative services, and the imbalance toward the urban (and wealthier) population. While politically difficult to accomplish, it will be necessary in coming years to shift the costs of much curative care to those who can afford to pay for it, by means of increased cost-sharing, insurance, and privatisation of health services (including increased NGO participation), so that limited government resources can be targeted toward community public health and preventive measures, and toward disadvantaged groups who cannot be included in other structures.

In practice, however, a large-scale reallocation of the government MoH budget is difficult to accomplish. A recent World Bank paper (Ref. 42) explores the possibility and impact of *using donor funds to facilitate this process by shifting their support towards community and preventive interventions while governments gradually reallocate expenditures over several years.* Such an investment by donors is justified by high internal rates of return for some diseases and interventions, and as an investment in long-lasting policy reform. Governments can reallocate funds from acute care to community and preventive interventions through a variety of policy tools, including increased use of user fees, sale or closure of curative facilities, contracting out of services in facilities and promotion of community insurance schemes. If these reforms are coordinated as elements of an overall policy reform package, they can improve both the efficiency and the equity of the system.

The current Health Policy Implementation Plan (February 1996) calls for a series of detailed studies on the current patterns of health financing and demand, and defines the resource reallocations that should result. These activities cover a 4-year period, from 1996 to 2000. Given that the scope of activities is very large and the resources in the MoH Health Care Reform Secretariat and Health Care Financing Secretariat are small, it seems unlikely that this plan can be carried out completely. However, the direction in which it points is appropriate, and also is appropriate as a guide to the JICA project design.

The World Bank study is based on analysis of resource allocation in five East African countries. This had the objective of determining the optimum allocation of financial resources to have the greatest impact on mortality, specifically age-adjusted mortality (DALYs). This is very close to JICA's objective of having maximum impact on *health status,* and is therefore worth close examination at this stage of the JICA project development process. The analysis clearly demonstrates the logic behind the recommended policy. This report also compares several of Kenya's key resource allocation data with neighbouring countries.

The report summarises the results of a structured approach to health policy formation in Eastern Africa, beginning with an examination of the region's Burden of Disease (BOD). It categorises health interventions both in terms of economic and public health criteria, and

it estimates their cost-effectiveness. It structures health expenditures in a program/disease format that coincides with the diseases and intervention types reviewed. It uses this information on cost effectiveness and expenditure patterns to estimate the current impact of health care expenditures. Reallocation of resources is modelled to estimate the effect these reforms would have on the region's burden of disease and the efficiency and equity of resource utilisation.

The analysis was limited to 10 causes of death and three broad categories of interventions for each disease. Most of the region's mortality is from preventable diseases, and fortunately the biggest killers also have the most cost-effective interventions. For the East African region as a whole, these are: perinatal/maternal mortality, diarrhoea, pneumonia, malaria, AIDS, TB, cardiovascular, malnutrition, measles, and injury, which account for about 76% of mortality. Kenya is the healthiest country in the region, losing only 0.17 life years per capita per year overall from accidents and illness, as compared with 0.28 years average in the region. It has a disease pattern similar to the regional average, excepting that Kenya has a significantly higher percentage of the total from perinatal/maternal mortality and somewhat lower in pneumonia. **Kenya's burden of disease is dominated by a small number of illnesses that primarily strike pregnant women and children under five. This implies that mothers must play a critical role in any effort to reduce mortality.**

Cost-effectiveness of interventions ranges from a low of $2 per life year saved through prevention of measles (in the case of Uganda) to a high of $6,339 for curative treatment of AIDS (in Kenya). For each major disease, the most cost-effective interventions were classified as curative, preventive, or community, which enables decisions to be made about whether they should be funded through public or private sources, on the presumption that individuals will not optimally fund programs that benefit the community ("public goods"), but will pay for treatments that have private benefits. The cost effectiveness of a given preventive or community intervention, such as malaria prophylaxis, varies between countries because of different costs, effectiveness, but especially degree of incidence. **In general, however, the biggest killers are the least expensive to manage, implying that resources should be shifted from the expensive diseases such as AIDS, cardiovascular disease, and injury/trauma, to pneumonia, malaria, TB, measles, and diarrhoea.**

The cost effectiveness of their health care would be improved by implementing more efficient interventions, using more efficient protocols for the same interventions, and/or targeting interventions better to vulnerable groups. This depends to some degree on the particular pattern of health expenditures. Kenya's per capita total health expenditure of $7.79, while meagre compared to industrialised countries, is close to the **WHO's cost estimate for a basic essential package of services[1] of $10.49 for Kenya when adjusted for Kenya's disease pattern and intervention costs, which includes $7.07 for clinical services and $3.42 for public health, and opens the possibility of reallocation of resources as a priority, rather than augmentation. In other words, present**

[1] Basic clinical services in this package include treatment of illnesses in children under age 5, treatment of TB, treatment of STDs, prenatal care and safe delivery, and limited, basic care for adults. Basic public health interventions include vaccinations, de-worming, vector control, monitoring and surveillance, tobacco and alcohol control, health education and AIDS prevention.

government and donor spending could pay for well more than the public health package, and total spending could pay for 74% of the total package.

In reality, however, since a large proportion of the MoH budget is actually expended in Nairobi on KNH and administration, the actual amount available for a package of services at *district level* is considerably less, perhaps as little as $3 per capita according to the Study Team findings.

Many curative health interventions are both inexpensive and cost effective. Thus, households should be both able and willing to pay for them. Yet government resources are concentrated on curative care, and most of these subsidies are untargeted, at best, or targeted to the rich, at worst. Both the efficiency and the equity of health care expenditures would be improved by reallocating curative budgets to community and preventive interventions that would not be undertaken by households.

Since existing government/donor expenditures already exceed the cost of a basic public health package, not all the cost of curative services need be shifted to private spending. Within the part of curative that remains financed by public and donor funds, efficiency could be improved if the emphasis is shifted to more cost-effective interventions, such as for pneumonia, measles, perinatal/maternal conditions, and TB.

The World Bank study modelled a package of interventions:

> reducing the tertiary hospitals' share of annual recurrent budget from the current level of 14 percent to 9 percent over five years, matched by a 25 percent reduction in donor support, and reallocation to targeted diseases.
>
> privatising patient food programs, requiring patients to pay for these provisions, and contracting out hospital cleaning and laundry services.
>
> decentralisation and subsidy reduction for district and provincial hospitals, with the establishment of hospital management boards and the imposition of fixed annual budgets on each institution, with MoH disbursements to be reduced by 20 percent over a 5-year period.
>
> increasing the level of cost sharing from 7 percent of overall MoH budget to 30 percent in five years, with restriction of age-based exemptions to under-fives, and continuing disease-specific exemptions and poverty waivers.
>
> allocation of government and donor funds freed up from the above reforms to malaria, pneumonia, diarrhoeal diseases, perinatal/maternal, TB, and AIDS. These resources would be targeted to community and preventive interventions and to curative services at health centres and dispensaries.

According to the model, these would have the following results:

> **the share of government spending allocated to community and preventive interventions would rise from 23% to 42%.**
>
> **Additional spending required after the shifts would amount to 10% of the current level. All of the additional spending would come from household (private) sources.**

This increment of 10% in spending would result in an additional 20% of life years saved over the present level, and a 9% reduction in Burden of Disease.

A bolder, but seemingly rather less feasible, reallocation exercise moves 50 percent of current government and donor expenditures on curative interventions to community and preventive care. Half the overall reduction in curative expenditures is taken from hospital level funding, under the assumption that aggressive measures would be taken, such as higher-level cost sharing at hospitals, closing hospitals, and privatisation.

The *least* cost-effective curative interventions are of two types: expensive treatments for catastrophic illnesses; and relatively cheap interventions for common non-fatal diseases and conditions. Relatively few households will be able to afford expensive treatments for serious illness. If government and donors wish to reduce their support for these interventions, they must promote the development of a universal health insurance system so that people can pay when healthy to reduce financial risks associated with illness. Most families will be able to afford relatively inexpensive interventions for mild diseases and conditions. In addition, the government must develop the capacity to target remaining subsidies to the truly destitute.

The second part of this more radical reallocation exercise involves a hypothetical injection of additional donor (and NGO) funds equivalent to US $2 per capita, to be used exclusively for community and preventive interventions. These would again be allocated strictly on the basis of cost effectiveness. The results of this exercise are extremely impressive: an additional 70% of life years saved for the additional 19% in spending, a total reduction in burden of disease of 55 percent, and an estimated 67% reduction in under-five mortality to 34 per 1,000.

As unfeasible as these more drastic reforms appear, there is a kernel of reality in the case of Kenya. Kenya is unique in the region in having an established health insurance system that is specifically intended to mitigate the costs of hospitalisation, although it currently is not working well at present. If it were performing as intended, the first drastic reform could become thinkable. The second part could be implemented by a consortium of donors, with the implementation of the first part as the necessary condition for a grant or concessionary loan.

6.3.3 Reallocating Resources Would Also Improve Equity

Data from the Kenya Welfare Monitoring Survey of 1994 (Ref. 14) shows that utilisation of health services in Kenya is high in comparison to other developing countries, in terms of annual average number of contacts with the health services. An average of 3.2 contacts per capita per year in the rural areas and 4 annual contacts in urban areas is well over double that found in most other sub-Saharan African countries, and on a level with some Asian countries with well-developed health systems. The hospital admission rate is 291 per 1000 population in rural areas and 297 per 1000 in urban areas. These are also extremely high rates in relation to those seen in other developing countries.

In contrast to these high rates for curative services, the rate of utilisation of preventive services is very low, about 110 preventive visits per 1000 population per year in rural areas. In rural areas of Kenya, nearly half of all cases resort to drug peddlers or traditional healers as a first course of action. The wealthy use preventive services much more than the poor. Since preventive care is more cost-effective than hospital care, this reinforces the need to allocate more resources to prevention, and to target interventions to the rural poor.

One analyst (Ref. 16) asks whether excessive public spending on hospitals leads to high rates of hospital admissions, or if the high admission rates encourage heavy spending on hospitals. The answer is most likely a combination of the two factors: the rapid expansion of the rural health facilities after independence proved unsustainable, so the rural system was allowed to deteriorate while political and public pressure maintained spending on hospitals. The sick in rural areas have little access to services that are sufficient in quantity (geographically accessible) and quality (services, drugs, are actually provided). Their most common response is to use the nearest affordable source of treatment, usually herbalists or poorly informed drug peddlers, from which many cases of illness do not respond, and eventually gravitate to hospital outpatient departments in the nearest town. By this time many cases are serious and must be admitted as inpatients.

Another World Bank study (Ref. 41) examined the effect on the poor of reallocating the government subsidy from hospitals to rural health facilities. Indirect subsidies to the wealthy and to urban residents are greater than to the poor and rural residents, due to higher government expenditures on the hospitals used in a higher proportion by the non-poor, rather than on health centres. The highest levels of subsidy are to hospitals, followed by dispensaries, which are under-utilised[2]. Health centres, the most utilised public facility by the poor, receive the lowest subsidy per visit.

The targeting of overall recurrent expenditure on curative health service is dominated by the weak targeting of the hospital-based subsidy. Although the subsidy on health centres is better targeted in the sense that more of it reaches the poor, the pre-emption of public expenditures by the hospitals reduces the overall poverty impact of public expenditures on health.

Not only do the hospitals receive the higher direct subsidy through the MoH budget, but the fee charged under cost-sharing covers a much smaller proportion of the true

[2] 3 million visits to 1555 dispensaries, compared to 15 million visits to 294 health centres.

cost of services at hospitals than at health centres, so the rural poor, who use health centres in higher proportion, in effect subsidise the predominantly urban hospitals through their fees.[3]

An overall reduction in the public subsidy to hospitals that would reduce the subsidy now available to the wealthiest 30% of households, if reallocated to expenditures on health centres would raise the per capita subsidy on health centres, assuming no change in the pattern of visits to health facilities. The implication is that reallocations can simultaneously reduce the two sets of inequalities: publicly-financed benefits now offered more to hospitals than to health centres, and to the rich more than to the poor.

6.3.4 Resource Reallocation Between and within Health Facilities

Given the foregoing theoretical demonstration that refocusing resources makes large improvements in health status possible, the problem remains of how this can be accomplished given the realities of the existing hospitals. Although not highly emphasised, this is recognised in the Agenda for Reform: **"*Incremental* increases in the recurrent budget are to be *preferentially* allocated to P/PHC."** This suggests that hospital curative budgets will remain essentially fixed at their present level, and implies that cost-sharing revenues will be used preferentially for P/PHC.

Is it realistic and reasonable to expect hospitals to manage on present budget levels, when they are widely regarded as being underfunded? If the JICA Project will be involved with district-level management and planning issues, this will be one of the central issues that the District Health Management Boards will have to face as more real power to set budgets is devolved on them. It is likely to be a difficult issue, given the trend toward separation of the district hospital management function under the Hospital Superintendent and the requirements of the rural health facilities under the Medical Officer for Health (MoH).

Budget data reveal that hospitals now account for about 65% of government health spending. These recent published MoH budget figures show allocations as follows (in millions of Kenyan pounds = 20 Kshs., at the current exchange rate of 63 Kshs. = US$1.00).

[3]The reverse is true at dispensaries where services are free of charge, but these are much less frequently visited, and in any case locally-organized community funds are now requiring payments even higher than health centres in some cases.

Table 6.3 Ministry of Health Budget Evolution, 1996-2000

Title	96/97 printed	97/98 forward	98/99 forward	99/2000 forward
Kenyatta National Hospital	62.55	62	62	62
Provincial General Hospitals	65.7	68.41	71.08	73.69
District General Hospitals	144.23	155.42	164.96	171.51
Other Curative	10.49	11.34	12.32	13.06
Primary Health Care (includes P/PHC and rural health facilities)	80.26	85.71	89.48	93.27
Health Training	19	19.78	21.76	23.9
Administration and Planning	16.47	18.28	18.88	18.41
National Hospital Insurance Fund and MSCU	12.39	13.31	16.22	22.15
TOTALS	507.09	531.25	554.7	576.99
Percent increase on previous yr.		4.76%	4.41%	4.10%
Percentage for curative	55.80	55.94	55.95	55.51
Percentage for preventive	15.83	16.13	16.19	16.16

Source: Programme Review and Forward Budget 1997/98-1999/2000

Two facts stand out: a) The 4 to 5% annual increase will probably not be sufficient to keep up with inflation, and certainly will not keep up with both population growth *and* inflation; and b) the proportion of the budget allocated to curative health care is *not* decreasing, and the proportion allocated to preventive/rural health is increasing by an insignificant amount. The vote for district hospitals increases at a slightly higher rate than the total, so if they are considered as preventive/rural services the rate of budget growth for P/PHC would increase to slightly above the average. However, the increase in the district hospital vote is probably related to the increase in number due to the newly created districts.

The fact that the central government budget does not reallocate funding to preventive services means that other sources such as donors and cost-sharing must cause this needed shift. This places extra importance on generating enough cost-sharing (FIF) revenues, and, equally critically, making sure it is spent on P/PHC functions. To date, a large portion of FIF revenue has been used to supplement regular budget allocations. To a significant degree, the responsibility for assuring this will be decentralised to the districts.

6.4 OPERATING COSTS AND FINANCING GAPS

6.4.1 Hospital Curative Services

Whatever the causes for high utilisation of hospitals by both inpatients and outpatients, the policy reform agenda clearly is based on the assumption that there is substantial scope for cost savings (or maintaining costs close to present levels in the face of increasing population) by reducing the rate of hospital admissions. Past studies in Kenya (Refs. 22, 23) and in other countries have generally shown that the average cost of treatment of outpatients increases with the level of care. That is, lower costs are found in the smaller, more peripheral facilities that use fewer and cheaper inputs, and rise steadily as the intensity of resource use increases, at health centres, secondary, and tertiary hospitals.

Whether real cost reductions will actually result as the patient load decreases in the higher level facilities and increases at the periphery, is a complex question. Many hospital costs are fixed, or at least highly resistant to decreases with patient volume. At the same time, average costs would decrease in the peripheral facilities but total costs would increase. At best, there would be system-wide savings only in the long term as overall efficiency is increased.

Two studies of MoH hospitals have yielded useful and provocative results. A 1995 study (Ref. 22) surveyed a sample of government and NGO hospitals and determined "standard" costs on the basis of the cost per unit of output of the best quality (as measured by a composite index) hospital in each of three size categories, with costs adjusted for any areas which were notably deficient.[4] The adjusted unit service costs for the best hospital (including the NGO hospitals) in each size category were then used as the standard costs[5]:

[4]For example, in the 'medium volume' category, Tenwek Hospital was the highest quality (in fact, the highest quality of any size hospital), but was considered to be understaffed according to the average staffing level of similar size hospitals, so staff costs were adjusted upwards. Similarly, drug costs in Gok hospitals were considered too low due to undersupply, so were adjusted to the level of the Mission hospitals. While it may appear that this methodology fails to emphasize the high productivity of staff at, e.g., Tenwek, it is an accepted accounting approach to determining standard costs.

[5]Alternative ways of interpreting the data, such as taking the average of all hospitals in the groups, yielded similar results, with the notable exception of much lower inpatient costs in low volume hospitals.

Table 6.4 Standard costs for three hospital scales

Size Category	Inpatient cost per day Kshs.	Outpatient cost per visit Kshs.
High Volume (Coast PGH)	173.4	142.2
Medium Volume (Tenwek)	260.1	205.7
Low Volume (HF Nangina)	349.6	62.8

Source: Ref. 22

The results for inpatient costs are not surprising, and reflect the economies of scale of large hospitals. The difference in outpatient costs is harder to explain but may be due to differences in the services offered and the cost of outreach clinics and community-level programs.

Table 6.5 Components of costs for three scales of hospital operations

Costs (Kshs.) 1993	High Volume (Coast PGH)	Percent	Medium Volume (Tenwek)	Percent	Low Volume (Nangina)	Percent
Inpatient Costs per bed day						
Staff Costs	55.7	37.3%	60.4	25.7%	55.2	38.5%
Drugs and Medical Supplies	28.4	19.0	22.3	9.5	26.2	18.3
Food	24.3	16.3	29.8	12.7	6.4	4.4
Ancillary Dept. Costs	20.5	13.7	38.6	16.4	15.6	10.9
Overheads	20.5	13.7	83.4	35.6	39.8	27.8
Total Cost	149.4	100%	234.5	100%	143.2	100%
Outpatient Cost per visit						
Staff Costs	35.1	30.1%	29.9	15.5%	2.8	6.9%
Drugs and Medical Supplies	21.0	18.0	60.6	31.4	19.6	49.0
Ancillary Dept. Costs	45.9	39.4	21.6	11.2	8.6	21.4
Overheads	14.5	12.4	80.7	41.9	9.1	22.7
Total Cost	116.4	100%	192.7	100%	40.0	100%

Source: Ref. 22

Next, using the outpatient and inpatient utilisation data for all Gok hospitals in each size category, the total overall recurrent costs were found by multiplying by the "standard" costs. Capital costs of 5% were added, yielding a total financing requirement of Kpounds 141,604,934. The net actual expenditure on curative health (excluding KNH) in the same

year was Kpounds 94,489,244, indicating a gross financing gap of Kpounds 47,115,690. Applied separately, the same analysis showed that the large provincial hospitals were actually slightly **overfinanced,** while the district and subdistrict hospitals are most underfinanced, by 41%. **The financing gap for MoH hospitals in 1992 US dollars was $26,019,267, or $1.10 per capita,**

6.4.2. Primary Health Care

A 1990 study (Ref. 23) measured the current costs and the financial resource gap for the rural health facilities and hospital inpatient departments. This study made a more methodical attempt than the later Curative Financing Gap study to project the expected costs if the facilities were to operate at their full planned utilisation levels, and included all required inputs, such as equipment investment and maintenance, building maintenance, full-staff costs, staff in-service training, drug supplies, transport investment and maintenance, and patient food. These are presented below (costs in millions of 1990 Kshs.)

Table 6.6 Expense categories and financing gaps for PHC

Expense Category	Current expenditures	Full-capacity expenditures	Gap	% of current level
Drugs	275.7	354.7	79.1	29
Equipment	6.3	13.5	7.2	114
Transport	19.3	36.6	17.3	90
Training	42.2	47.3	5.1	12
Supplies	41.1	102.4	61.3	149
Patient food	1.7	7.6	6	352
Building Maintenance	3.3	86.6	83.3	2524
Staff Costs	765.5	936	170.5	22
TOTAL	1156.8	1584.7	429.8	37%
TOTAL EXCLUDING STAFF COSTS	391.3	648.7	259.3	66.2%

Source: Ref. 23

The total PHC financing gap is 37%, but the non-wage resource gap is 66%. This is much higher than the current contribution of the FIF to non-wage recurrent expenditures found in the RHFs in the Study Area (discussed later), **and indicates that cost-sharing revenues must be increased by a factor of four in order to eventually fill the PHC financing gap.**

The importance of each category of financing gap should not be confused with its size. For example, although the transport maintenance gap is relatively small, transport has been identified as a major constraint to the delivery of P/PHC. The shortage of drugs and other supplies are considered to be more serious constraints than the larger gap for staff.

Equipment maintenance is another gap that is small in absolute amounts, but critical in terms of need and efficiency.

The gap can also be looked at in terms of facility level, with dispensaries and health centres grouped together as Rural Health Facilities.

Table 6.7 Financing gap components for RHFs and hospital OPDs

Rural Health Facilities	Current Expenditure	Gap
Drugs	196.7	43.9
Building Maintenance	2.1	73
Personnel	309	81
Supplies	13.3	37
Total	521.1	234.9 (44% of total)
TOTAL NON-STAFF COSTS	212.1	153.9 (72% of total)
Hospital Outpatient Departments		
Drugs	79	35
Building Maintenance	1.2	10.3
Personnel	456.5	89.5
Supplies	14.6	23.7
Total	**551.3**	**158.5 (29% of total)**
TOTAL NON-STAFF COSTS	**94.8**	**69.0 (73% of total)**

Source: Ref. 23 (All costs are in millions of 1990 Kshs.)

The funding bias toward hospitals is clear from the above data, with health centres and dispensaries requiring an additional 44%, as compared with 29% for OPDs. The maintenance gap is notably large for RHFs. However, the drug and personnel gaps are smaller. The financing gap for non-staff costs for both outpatient departments and RHFs is about 73% in order to improve the quality of services. This is the gap that should be the target of the FIF/cost-sharing effort.

This study did not determine unit costs, although it is possible to make some estimates based on the workload estimates used in the study itself. Assuming 2,000 visits per month for each of 850 dispensaries, 3,000 visits per month for each of 310 health centres, and 10,000 visits per month for each of 82 outpatient departments:

Table 6.8 Comparison of per-visit costs at RHFs and OPDs

Level of Facility	Current funding level (millions Kshs.)	Full utilisation funding level	Annual visits	Cost per visit at current funding level	Cost per visit at full utilisation funding level
Rural Health Facilities	521.1	756.0	31.56 million	16.5 Kshs.	23.9 Kshs.
Outpatient Departments	551.3	709.8	9.84 million	56.0 Kshs.	72.1 Kshs.

Source: Ref. 23

The cost per outpatient visit at the hospital outpatient department is seen to be about three times the cost of a visit at a rural health facility, according to this 1990 study.

The JICA Study Team's field investigations also gathered information on the cost of MoH services in the Study Area. The costs of outpatient and inpatient services were not separated in a way that make it possible to compare with the above studies, but the crude results suggest that hospital unit costs have increased substantially since the 1995 study, due primarily to increases in wage costs.

Table 6.9 Unit Costs of Facility Operation and Services in the Study Area

	Typical Total Costs (A)	Typical Total Visits (B)	Average Recurrent Cost per Visit (C)
Health Centres			
Gucha	2,817,089		
Kericho	1,627,624		
Kisii	2,059,050		
Nyamira	1,663,626		
Bomet	1,624,712		
Average	**1,958,420**	**30,348**	**67.8**
Dispensaries			
Gucha	651,398		
Kericho	419,763		
Kisii	737,636		
Nyamira	728,421		
Bomet	538,550		
Average	**615,154**	**27,983**	**23.1**
District Hospitals	**Total Recurrent Cost**	**Total Bed-Days+OPD**	**Average Cost per Unit**
Kericho	57,754,938	168,039	360.9
Kisii	70,743,017	333,111	223.0
Nyamira	43,594,014	113,147	404.6
Average	**57,363,990**	**204,766**	**294.2**

Source: JICA Study Team Investigations

Although the cost and utilisation data from the Study Area is incomplete, several important results are shown in the above table:

First, the cost differences (Column A) between the districts are mostly due to differences in *actual* staffing patterns. Gucha district health centres are probably costlier because more staff have been assigned to them in the absence of a district hospital. The total costs of the hospitals may be somewhat inaccurate because of incomplete and inaccurate information about drug supplies to the hospitals - in some cases the hospitals used some drugs intended for the rural health facilities. Further, it must be noted that most of the rural facilities are understaffed (refer to the Human Resources chapter), so the real wage cost is underestimated.

Workload data (Column B) for health centres and dispensaries was derived from the Field Study No. 4, Part II, which unfortunately did not disaggregate the data by the individual districts and level of facility. The utilisation figure for health centres and dispensaries is therefore the total workload for surveyed facilities in all districts divided by 5. For the district hospitals, the workload figure given is the total of bed-days and outpatient visits. This is because the cost data did not differentiate between inpatient and outpatient-related costs, so the final average unit cost is based on the somewhat arbitrary assumption that the cost of one bed-day occupancy is the same as the cost of an outpatient visit (based on drug consumption, nursing time, and administration).

Finally, the average costs (Column C) are simply the average recurrent costs of the typical health facility divided by the average workload, increased by 5% to cover investment and depreciation costs.

The results are consistent with the previous findings of the financing gap studies. The only significant differences seen between districts suggest that Kisii Hospital is underbudgeted for its workload, compared to Nyamira and Kericho Hospitals. Even allowing for a substantial margin of error in the data, the results show a striking difference in the costs of care at the three levels of district health services. Hospital treatment is about 5 times as expensive as treatment in health centres, which is about 3 times as expensive as treatment in dispensaries. While the quality of care certainly differs, in general this supports the policy for trying to treat as many patients as possible in lower-level facilities, even if it means building more of them.

Table 6.10 Average RHF costs in Study Area 5 districts (1997 Kshs)

	Health Centres		Dispensaries	
RHF Vote (estimated)	72,758	3.7%	36,379	5.7%
Staff Costs	1,403,637	71.7%	417,081	65.1%
Drug Kit Costs	407,947	20.8%	156,479	24.4%
PHC expenditure plus FIF	73,007	3.7%	31,226	4.9%
Total Expenditures	1,957,349		641,165	

Source: JICA Study Team

The table below shows that in the Study Area, the costs associated with running the district hospitals consume 63% of the total budget for curative services in the districts. District hospital staff costs alone consume about 47% of the district curative budget. Health centre staff costs consume 11.5% of the total curative budget, and dispensary staff costs account for 13.7%.

The high proportion of staff costs is "the bad news", but it also is good news in that if it were possible to reallocate only a small proportion of staff costs to non-staff expenses, a significant part of the financing gap would be filled.

Table 6.11 Distribution of MoH Facility-Level Expenditures in the Study Area (All 5 districts)

MoH Facility Type	Average Annual Cost Kshs.	Total Number of Facilities in Study Area	Total Costs Kshs.	Percentage of Total
District Hospitals	57,364,000	4	229,456,000	62.6%
Health Centres	1,958,000	30	58,740,000	16.0%
Dispensaries	615,000	127	78,105,000	21.3%
Total			366,301,000	

Source: JICA Study Team

Capital investment gaps were also estimated (Ref. 23), as one-time expenditures needed to bring the P/PHC system up to full operating capacity, *not* including building rehabilitation:

Table 6.12 Estimated investment needed for P/PHC

Category	Expenditure Gap (in millions of Kshs.)
Equipment and vehicles	315.8
Transport	5.5
Training	27.3
MCH/FP rooms in dispensaries	26.5
TOTAL	375.1

Source: Ref. 23

6.4.3 Hospital Efficiency

A 1997 study of MoH hospital economics (Ref. 39) used an econometric modelling technique to determine the production function of Kenyan government hospitals. This research found that there were economies of scale to be derived from increased inputs, or in other words, the 36 public hospitals have been operating below their long-run efficiency level. More importantly, the short-term average efficiency of the hospitals is only about 70% because of a sub-optimum mix of inputs. If the optimum mix of inputs were being used, outputs (inpatients, outpatients, and operations) could be increased by a further 30%

with the existing resources or alternatively, the present level of outputs could be produced at 30% lower cost. This finding in a sense contradicts the more widely held assumption that the hospitals are underfunded, yet it is not surprising to also learn that the hospitals are inefficient.

The reasons behind this finding were found to be mainly due to shortage of professional staff; poor combination of inputs; irregular or non-functional theatres and laboratories; transport problems; lack of, or poor distribution of drugs and medical supplies; and frequent breakdown or poor servicing of machines and equipment. In somewhat more detail:

Staffing: a serious shortage of medical staff[6] exists. On average, the professional staff were found to be in short supply, while facilities are overstaffed with non-health workers. This contradicts reports that there are too few auxiliary staff after the recent retrenchments. In addition, the survey found that not only were fewer consultants on staff than called for, but that the consultants spend far less time on their official duties than they were being paid for. Low wages among professional staff have resulted in poor performance and the soliciting of tips from patients.

Operating Theatre: these suffer inefficiencies resulting from critical inputs such as drugs or functioning equipment not being available. Fewer operations are performed than needed, and skilled staff are under-utilised. Longer patient-stays result from delays in procuring these.

Transport: Inadequate transport leads to economic inefficiency as it interferes with a proper combination of transport and other inputs; old vehicles entail high operating and maintenance costs; and the supervision of P/PHC and other hospital activities is affected adversely.

Drugs and medical supplies: shortages affect utilisation of hospitals and performance of necessary inpatient and surgical operations.

It is useful to compare MoH hospitals with NGO hospitals in terms of their funding of some of these key health inputs.

[6] Since no official staffing norms were available, this was based on a comparison between actual and required personnel from the latest Development Plan.

Table 6.13 Major cost categories in NGO and MoH district hospitals (1995)

Cost Ratio to Total Costs	Average of 6 NGO hospitals	Average of 6 MoH district hospitals
Staff costs	38.9%	60.8%
Drugs/medical supplies	27.8%	26.0%
Other supplies	0.4%	0.3%
Food costs	8.6%	5.1%
Transport	3.9%	2.1%
Maintenance	6.7%	2.4%
Utilities	4.3%	2.6%
Other overheads	9.4%	1.1%
Total Cost Per Day	**184.1 Kshs.**	**216.7 Kshs.**
Total Cost Per Visit	**142.1 Kshs.**	**79.2 Kshs.**
Average quality score	**52.5**	**33.6**

Source: Adapted from Ref. 22

The Study Team's own field investigations were not able to determine the exact percentage of personnel costs in all district hospitals in the Study Area because certain key data was missing. However, taking into account recent salary increases, the present percentage appears to be around 87% of the current MoH hospital AIEs. This figure would be closer to 74% of total expenditures after adding in the value of drug kits consumed, and the FIF revenues used by the hospitals. When the drug costs are counted, the percentage of total costs used for "patient care" items reaches nearly 20%.

The differences in resource allocation between MoH and NGO hospitals is striking, especially in staffing and maintenance, two areas which the efficiency study identified as problems. Tenwek, the highest-quality scoring hospital of those surveyed, spends 13.4% of its budget on maintenance, compared with an average of 2.4% for MoH district hospitals. It also employs only 0.37 Enrolled Nurses per 1000 bed days, compared with 1.82 for the MoH hospitals. It is remarkable that the better quality NGO hospitals also provide inpatient care at lower cost than the MoH hospitals. This outcome is most likely due to the much higher nursing costs per bed day at MoH hospitals, due to higher staffing ratios, especially of Enrolled Nurses. The District hospitals have a lower cost per outpatient visit, however, due to a *lower* ratio of OPD nurses and doctors.

The authors of the efficiency study conclude that output and access could be improved at relatively little cost, and make recommendations for improving the level of the critical inputs. Among the more innovative ones are a system of incentive payments for staff, perhaps derived from increased patient fees, "cash-and-carry" drugs and supplies from zonal depots, self-maintenance of machinery and equipment rather than contracting out,

and a health-card system for the poor, which would "attach" them to their nearest facility. Drugs are an area that is identified as having high potential for efficiency improvement (Ref. 11), and this will be the main focus of the Essential Drugs Program and the National Drugs Policy, which includes interventions to improve management and clinical factors affecting efficiency.

6.4.4 Interpreting the Cost Studies

The latter study was only presented recently, and once it has been more widely disseminated it should generate controversy since it in effect says that there is no significant hospital funding gap. If a similar study of rural health facilities were to be carried out, it is entirely likely that a high level of inefficiency would also be found, for similar reasons. Although this study is of a rather theoretical nature, it serves an important purpose in bringing up efficiency as an issue that needs to be managed as seriously as cost-sharing has been. However, correcting these problems will cost money and management time.

Hospital and perhaps Rural Health Facility efficiency could be improved by changing the mix of inputs. Inadequate funding of maintenance and misallocated staffing are probably two of the most critical areas. To achieve improvements it will be necessary to reallocate staff within the districts and raise staff productivity in the MoH hospitals, and raise the resources and management inputs to maintenance. It seems likely that by addressing these key areas, and also drugs and transport, the operating efficiency of facilities could be raised to a level that cost-sharing revenues might make up most of the remaining real gap.

6.5 COST-SHARING

Health financing has clearly received serious attention in Kenya, and, unlike most other countries that found themselves in similar financial straits in the 1980's, clear policies and plans were adopted to deal with the problem of insufficient resources to meet the demand for health services. Whatever the extent to which it has been donor-driven, it is also true that health financing has also driven overall health policy reform. It is equally clear that this strategy is accepted as the overall policy direction of the MoH, from there will be no turning back.

The history of cost-sharing is well-documented (Ref. 13). Despite the Gok's intention to provide free health care to Kenyans, user fees existed in some facilities in the post-independence period, but these were nominal and not collected in a serious way because they were returned to the Treasury and no benefits accrued to the collecting facility. After several years of discussing policy alternatives (Ref. 7), in 1989 a new program, the

Kenya Health Care Financing Programme, was started and outpatient fees or registration fees were introduced at most levels of the system. Existing inpatient fees were raised to a more meaningful level and modified somewhat. A new system of waivers and exemptions was introduced. This time revenues were to be retained at the facility, with a proportion be used for PHC activities in the district as well. Over 500 revenue clerks were hired and trained. Increased reimbursements for inpatients from the National Hospital Insurance Fund was also planned as a major source of "cost-sharing" revenue, with the premium revenue coming from payroll deductions of civil servants and other workers in the formal sector.

The Registration Fee proved unpopular, however, primarily because people often still had to buy prescribed drugs from outside sources, and in 1990 it was cancelled by Presidential order. A year later they were reintroduced, in the form of a Treatment Fee which would be paid only after the patient received drugs and other treatment, and the system was now referred to as the Facility Improvement Fund (FIF) rather than Cost Sharing. One of the underlying principles was that the FIF would be used to improve the quality of care, and therefore people would be more willing to pay the user charges. The system has functioned reasonably well up to the present. Recent evaluations and consultants' studies have pointed out reasons for its success and some shortcomings.

The additivity[7] and retention[8] features have encouraged facilities to collect fees. Collections have increased since 1992 to approximately 15% of the non-salary recurrent costs of running health facilities although some facilities and whole districts are still achieving low percentages of their collection target.[9] A monitoring system is in operation. However, expenditures on facility improvements have not always been made commensurately because part of the funds are often used to make up for central budget shortfalls in basic items needed for patient care, and funds also disappear before they can be banked, or remain unspent. The approval process for expenditures is lengthy, having to go through the central Health Care Financing Secretariat, but this process is being decentralised to the Provincial level.

6.5.1 Cost Sharing Performance:

The system of exemptions has been modified to improve fee collection by eliminating free services for children between ages 5 and 15, but the system of waivers for the poor is not followed well, with the result that some poor may be deterred from using services. The basic fee structure, which was intended to receive periodic gradual increases, has not been changed since 1994, meaning that the fees have not even kept up with inflation

[7]The Treasury (Ministry of Finance) does not reduce the MOH budget as a response to increased locally-generated revenues, and the MOH would not reduce the centrally-allocated vote of any particular facility or district.

[8]75% of revenues collected is retained by the generating facilities as the Facilities Improvement Fund (FIF); thus the majority is used to improve service at facilities; the other 25% is pooled at the district level to be used for improving P/PHC, and is under the control of the DHMT.

[9]Collection targets are basically generated from the facility's utilization figures from a previous period.

and are very low compared to NGOs and private facilities, and the amounts generated are not increasing as fast as they must in order to make a difference in service quality.

The project evaluation found that, while patients perceived that quality had improved at Provincial Hospitals, at District Hospitals patients noticed that the premises were cleaner but were not impressed by quality changes. The evaluation survey was done only 6 months after the fees were introduced, however. The cost of collecting, accounting for, and managing the funds have been estimated at not more than 10% on average of the revenues collected in recent years (Ref. 13).

Table 6.14: National Revenues from Cost Sharing Program
(Dollar figure based on the prevailing exchange rate)

Years	MoH	KNH	Total	
	Ksh Mn	Ksh Mn	Ksh Mn	US$ Mn
1989/90	0	21.4	21.4	0.86
1990/91	28.5	20.6	63.4	2.11
1991/92	33.1	19.6	69.3	1.98
1992/93	62.5	41.1	134.8	1.93
1993/94	114.3	71.3	242.7	4.04
1994/95	153.9	99.4	330.2	5.69
1995/96	190.9	127.0	413.4	6.67
1996/97	205.1	185.9	467.9	8.51
Total	**788.4**	**586.3**	**1743.2**	**31.79**

Source: APHIA Financing & Sustainability Project Archives

The above table shows that cost-sharing revenues have increased steadily, and the total revenue has far surpassed the estimated US$ 5 million cost of the program. However, the table below shows that there is still much room for improved revenue collection.
Some DHMBs in the Study Area have taken the initiative of modifying the fee and exemption structure. For example, Bomet has eliminated exemptions for children under 5 years of age.

Table 6.15: Ratings of Provinces and districts according to their collection performance

Greater than 30% of targeted collection (17 districts)	Central Province (35.5%) Coast Province (31.2%) Nyanza Province (31.7%) Eastern Province (31.7%)
Between 10% and 30% of targeted collection (23 districts)	Rift Valley Province (18.9%) Northeastern Province (16.0%)
Less than 10% of targeted collection (13 districts)	Western Province (3.6%) Nairobi (0.5%)

Source: Ref. 11

Factors that reduce the impact of cost sharing by limiting the revenue collections include:

- Collection losses through staff negligence, lack of proper financial management systems, and fraud;
- Lack of drugs at some facilities leading to low attendance and low cash collections;
- Excessive exemptions from payment of fees was formerly a problem, but the exempt categories have been changed;
- Hospitals' failure to collect on claims to the National Hospital Insurance Fund.

Comparison of Collections and Expenditures in the Study Area:

As seen below, hospitals and health centres in the Study Area expended less than they collected. One of the major problems with the way the system works now is that funds remain unspent because of the time required to receive authorisation for expenditure from the HCF Secretariat. This will improve with the decentralisation of this function to the provincial level. The differences between collections and expenditure can also be because funds can be carried over from year to year, to poor bookkeeping, or both.

Table 6.16: Cost-sharing performance in the Study Area

	Kericho	Nyamira	Gucha	Kisii	Bomet	**All Districts Percentage Spent**
Dist. Hospital/SDH collected	2,276,445	1,414,945	N/A	4,834,580	104,930	
Hospital/SDH expended	1,969,395	1,753,384	N/A	3,445,503	318,800	**86.7%**
Average Health Centre collected	61,195	60,523	181,123	112,216	86,990	
Average Health Centre expended	37,433	54,888	57,018	186,703	82,768	**83.4%**

Source: JICA Study Team data

Table 6.17: Cost-Sharing revenues spent as a percentage of budgets

Study Area District	**District Hospitals**		**Health Centres**	
	% of total budget	**% of non-wage budget**	**% of total budget**	**% of non-wage budget**
Kericho	**3.5**	**10.7**	**2.2**	**6.8**
Kisii	**5.1**	**20.1**	**4.9**	**14.4**
Nyamira	**4.2**	**22.7**	**4.6**	**17.6**
Bomet	**2.8**	**8.3**	**5.5**	**28.6**
Averages	**3.9**	**15.4**	**4.3**	**16.8**

Source: JICA Study Team data

Cost sharing in the Study Area districts contributed about 4.3% to the total recurrent costs of rural health facilities. Contribution to district hospital costs (not including 5% capital investment cost) ranged from 3.5% in Kericho to 5.1% in Kisii. In terms of the non-wage recurrent costs, the FIF was equivalent to about 17% for the RHFs, and from 11% to 23% for district hospitals (hospital drug expenditures could not be determined accurately, so this figure is only approximate).

The cost-sharing program can thus be said to be well-established and effective in the Study Area, but the results, especially the percentages of non-wage recurrent budget, should be interpreted with caution because of the relatively low level of non-wage expenditures. This will be exacerbated with the trend toward increasing wage budgets (there was a 10% raise granted to government civil servants in 1997 alone).

Furthermore, a large proportion of the FIF (44% in RHFs and 39% in hospitals) was used for items that are considered "patient care", such as food, drugs, etc. This means that it was merely supplementing the inadequate MoH budget for necessary items. In one sense, this is making a contribution to quality improvement, but it could also be

argued that this only brings the standard up to an acceptable minimum level. Only around 30% of the FIF was used for transportation, maintenance, and facility operations. And only Kericho District was able to show that part of the FIF was actually used for PHC activities.

DHMTs in all Study Districts agreed that it was essential to provide greater community sensitisation to cost-sharing. There was also wide agreement that management procedures need to be improved so that fraud and theft are reduced. Health Centre staff wanted more control over their funds, and did not want them to go into a district bank account. .

The current rate of cost-sharing revenue generation in rural facilities and available to P/PHC from District Hospital cost-sharing is at most 20% of non-salary recurrent costs. Assuming the size of the funding gap has not changed significantly from 1990, in order to fully fund the health centres, outpatient departments, and dispensaries, the rate must increase to around 70% of non-salary recurrent cost. The 'labour gap' is due to shortage or unavailability of trained personnel, and can be filled through redeployment or increased output of trained staff, especially from the district and provincial hospitals, which have been shown to be somewhat overstaffed, especially with nurses. If an adequate redeployment of personnel from hospitals to rural health facilities cannot be accomplished, additional funding for new staff will also be needed. The needed one-time investment to both upgrade the rural health facilities to provide a better and more attractive work environment, will most likely be provided selectively through donors.

6.6 PLANNING AND BUDGETING FOR DISTRICT HEALTH FACILITIES

A major implication of the above findings is that financial resources are allocated irrationally to MoH facilities. This is indeed the case, and the main reason that transportation, for example, is inadequate, for example, is that it is under-financed. And provincial hospitals are over-staffed because they are over-budgeted for staff. The reason that this occurs is that the most important element of the budgeting system, for the Recurrent Expenditure Vote, is nearly completely centralised in the MoH.

Decentralisation has occurred for the two other main components of the annual budget, by necessity for the Development Vote which is partly the result of a 'bottom-up' needs assessment coordinated by District Development Committees, and by design in the case of expenditure of FIF revenues at facility and district level, which is controlled by the District Health Boards.

All government ministries operate on a three-year budget cycle, broken down into annual cycles for both the Recurrent Vote and the Development Vote. The Public Investment Plan and Forward Budget is circulated beginning each July, the Draft Budget are prepared in September, and sent to departmental officers for revision from

December to March, and the revised Printed Estimates (Supplementary Expenditures) published shortly thereafter, which authorise expenditures. At the central MoH, it is claimed that the printed budget is based on a needs assessment, but this has been described as a "complete fantasy", and in fact a given facility's budget is based on the previous year's, plus or minus whatever increment has been given to the MoH by the Treasury.

6.6.1 The Recurrent Budget

Budget votes exist for all MoH central operating departments (including vertical programs and public and preventive health departments) and for MoH administration, for all provincial and referral hospitals, health training institutions (now including a subsidy to Kenyatta National Hospital), and every district hospital and sub-district hospital. There is one vote for "Rural Health Facilities", which includes all costs for all health centres and dispensaries in Kenya. This vote is broken down in the MoH Finance Department by district according to a formula that is supposedly based on the number of health facilities, population, and disease pattern. The Study Team's field investigations found that budget requests in most study districts are generated by Health Administrative Officers, which after approval by the DHMB gets passed to the central MoH finance department. However, it is not obvious that these requests are honoured in the actual budget preparation process. It is also likely that actual expenditures do not follow the exact vote categories. The system has evolved to a point where there is some flexibility and local discretion over expenditures, but since the basic system has not been officially modified, it is now cumbersome and wasteful of time and effort. In addition it fails to provide accurate information on expenditures and costs. Final budgets are remitted to a MoH account at District Treasuries, from which funds are drawn against signed AIEs.

A major implication of the above findings is that financial resources are allocated irrationally to MoH facilities. This is indeed the case, and the main reason that transportation, for example, is inadequate, for example, is that it is under-financed. And provincial hospitals are over-staffed because they are over-budgeted for staff. The reason that this occurs is that the most important element of the budgeting system, for the Recurrent Expenditure Vote, is nearly completely centralised in the MoH. (This study did not examine the Development Budget in detail.)

Decentralisation has occurred for the two other main components of the annual budget, by necessity for the Development Vote which is partly the result of a 'bottom-up' needs assessment coordinated by the District Development Committee, and by design in the case of expenditure of FIF revenues at facility and district level, which is controlled by the District Health Management Boards.

Table 6.18: Budget Allocation for Rural Health Services (Vote 113-335)
All Expenditure Items in Kenyan Pounds (= 20 Kshs..)

Sub-Head	1996/97 Printed Estimate	1996/97 Final Values	1997/98 Forward
000 - Personal Emoluments	27,594,256	18,402,525	29,558,967
050 - House Allowances	5,587,052	7,105,521	7,105,521
060 - Other Personal Allowances	1,609,290	1,650,683	1,850,683
065 - Medical Allowance	3,990,752	4,263,313	4,263,313
080 - Passage and Leave Expenses	383,100	400,250	402,250
100 - Transport Operating Expenses	1,350,000	1,600,000	1,650,000
110 - Travel and Accommodation	430,000	500,000	460,000
120 - Postal and Telegrams	11,520	50,000	13,500
121 - Telephone Expenses	130,390	180,000	140,000
140 - Electricity Expenses	263,350	400,000	300,000
141 - Water and Conservancy	234,000	400,000	250,000
143 - Fuel/Gas Expenses	56,700	100,000	68,040
151 - Purchase of Drugs	19,196,630	25,000,000	21,000,000
156 - Purchase of Oxygen	66,920	70,000	87,000
158 - Dressings & Non-pharm. Items	152,460	200,000	218,020
160 - Purchase of Food and Rations	1,500,000	1,600,000	1,700,000
170 - Purchase of Consumable Stores	100,010	150,000	115,000
172 - Uniforms and Clothing	67,190	70,550	75,000
174 - Stationery	108,240	115,000	129,890
177 - Printing of Medical Records	60,980	20,000	73,180
178 - Purchase of Hospital Linen	174,240	191,660	249,160
179 - Patients' Clothing	90,000	180,000	100,000
182 - Rents, Rates (non-residential)	2,750	3,300	3,500
190 - Miscell. Other Charges	500	500	700
200 - Replacement of Motor Vehicles	0	90,000	0
202 - Replace of Bicycles, M/Cycles	28,010	31,000	33,610
220 - Purchase of Plant & Equipmt.	60,640	100,000	72,760
250 - Maintenance of Plant, Machinery, Equipment	120,000	150,000	152,960
260 - Maintenance of Buildings and Stations	125,000	250,000	167,830
Gross Expenditure	63,495,966	63,276,298	70,242,881

Source: Ref. 12

Table 6.19: Rural Health Facility total budget by district

Sub-Head	Kisii	Gucha	Nyamira	Kericho	Bomet
Gross Expenditure	1,107,815	976,041	967,419	1,456,958	1,177,979

Source: Ref. 12

The budget process was reviewed in a recent study by an financial expert (Ref. 43), who recommended that the MoH establish budget norms for facilities (operations and maintenance), stop the practice of including recurrent donor expenditures in the development budget, and most importantly, increase the budget for maintenance, drugs, and transport, and analyse the recurrent cost implications of capital projects.

In an effort to discover how the actual current allocation was made between districts, the total budget was divided by the available population figures. The results indicate that, on a provincial basis at least (excepting Nairobi and the underserved Northeast),

population is an obvious factor, since budget per capita is in a narrow range from 2.25 to 2.82 Kpounds per capita:

Table 6.20: RHF budget per population for various parts of Kenya

District or Province	1994 Est. Pop	1997 Rural health facilities budget	Budget/capita (Kpounds/capita)
Bomet		1,178,000	
Gucha		976,000	
Nyamira	588,000	967,000	1.64
Kisii (includes Gucha?)	925,900	1,107,000	1.20
Kericho	598,000	1,457,000	2.44
Nairobi Prov.	1,660,000	1,905,000	1.15
Coast Prov	2,142,000	5,792,000	2.70
Eastern Prov	4,401,000	11,124,000	2.53
N-Eastern Prov	287,000	1,639,000	5.71
Central Prov	3,583,000	9,525,000	2.66
Rift Valley Prov	6,096,000	1,719,200	2.82
Nyanza Prov	4,060,000	9,364,000	2.31
Western Prov	2,998,000	6,736,000	2.25
Total Kenya	25,227,000	63,277,000	2.51

The analysis below, shows on the other hand that the Rural Health Service budget is not based on either the number of health centres (the budgets range from 110,000 to 292,000 Kpounds per health centre), or on total rural health facilities (from 24,000 to 70,000 per rural health facilities), nor on personnel (from 1400 to 3060 Kpounds per staff member). Neither is the personnel budget apparently based on the number of staff (last column). These figures for the number of facilities and staff may not be either reliable or up to date, however, but the analysis reveals that the budgets are primarily population-based and not facility-based.

Table 6.21: Test of possible budget allocation factors

District or Province	1997 Rural health facilities Budget/000	Nr. Gok HCs(1994)	Nr. Gok SubCentres & Disps	Budget per HC	Budget per Rural health facility	Gok Rural Health Personnel	Budget/RH Personnel	Personnel Emolument Budget	Personnel. Budget, per staff
Bomet	1178	6	22	196.33	42.07				
Gucha	976								
Nyamira	967	included in Kisii		included in Kisii					
Kisii	1107	11	19	188.55	69.13				
Kericho	1457	4	47	364.25	28.57				
Nairobi Prov.	1905	22	56	86.59	24.42	N/A			
Coast Prov	5792	37	165	156.54	28.67	3000	1.93	1683	0.56
Eastern Prov	11124	38	220	292.74	43.12	6800	1.64	3234	0.48
N-Eastern Prov	1639	11	31	149.00	39.02	800	2.05	476	0.60
Central Prov	9525	50	191	190.50	39.52	6800	1.40	2767	0.41
Rift Valley Prov	17192	100	376	171.92	36.12	9600	1.79	3167	0.33
Nyanza Prov	9364	42	129	222.95	54.76	5300	1.77	2722	0.51
Western Prov	6736	61	35	110.43	70.17	2200	3.06	1969	0.90
Total Kenya	63277	361	1203	175.28	40.46	34500	1.83	16018	0.46

Since neither the number of facilities or population is an ideal way of allocating health resources, at least the lesser of two evils was chosen. Neither method approximates a budget allocation based on *need* - the real cost of delivering health care to a catchment population. Population is only a rough proxy for need, since access and use are not taken into account, but it is a reasonably equitable place to start.

Allocation of recurrent budgets and other recurrent resources to districts and regions should be equitable and efficient, and therefore based on some precise and accepted formula related to actual need. Coming up with such an effective formula in Kenya requires reliable information as well as the political will to implement it. It will also be necessary to strengthen the district-level planning and managerial mechanisms to play their necessary part in this process.

The RHF budget allocations obtained from the MoH Finance Department show that there is no consideration of the actual unique needs of the districts taken when the MoH Finance Department allocates the Rural Health Facilities vote. The amount for every line item for each district is merely the total sub-vote divided in proportion to the district's total allocation (by population or whatever other formula might actually be used.) It is still unclear whether the funds must be spent only on the designated line items, or if the district management teams have discretion in fact to reallocate between line items. The Study Team's field investigations tended to indicate that actual allocations and expenditures were widely different from the budgeted amounts, but it the reason for these variances is still not clear.

Ultimately, these variations are not very important since the part of the actual MoH vote (budget) for rural health facilities (for which DHMTs *may* have some discretionary spending power) is only about 4 to 6% of total expenditures at the rural facility level, as shown in the

previous section. It is personnel costs, which are in practice a fixed part of the district-level budget, and drug costs, which are mostly donated and additional to the Rural Health budget, that actually comprise the large majority of RHF costs..

Similarly, no consistent logic could be found for district hospital budgets. Looking at several districts for which workload data was available, there is only the most approximate relationship between budget and workload. Gross hospital budgets varied from 1,035 Kshs. per admission (Kericho DH) to 160 Kshs (Kisii), with a similarly wide range is the calculation was based on bed-days occupancy. If the number of outpatients plus admissions is used as the denominator, Busia DH received a high amount of 70 Kshs. per unit, versus a low of 24 Kshs. for Kisii.

More must be learned about how budgets are set for district hospitals and rural health facilities at the central level. There must be a shift to a system of true needs-based budgeting, with budget related to workload, and staffing adjusted accordingly. Otherwise the current level of inefficiency will remain high. This will affect any JICA project since the health facilities in the project area may well be getting less money from the central budget than they should rightfully receive, placing more burden on the population for cost-sharing to make up the gaps.

It is clear that the present level of cost-sharing revenues is well below that needed to fill the financing gaps of both hospitals and rural health facilities. It may also be that the current division of cost-sharing revenues, with 25% allocated to PHC activities, may be too biased towards the needs of the hospitals, and a different formula might be more equitable and efficient.

Needs-based budgeting can also play an important role in helping to control costs. Hospitals and other facilities will eventually be provided with global budgets, which their management boards would be required to use in the best way to meet the needs of their community or catchment area. Several Kenyans have received training in hospital costing and resource allocation.

6.6.2 The Development Budget

District Development Plans covering a 5-year period are prepared by District Development Committees. These mainly concern the infrastructural needs of the districts. Once submitted to the Ministry of Planning in Nairobi, the district plans are reviewed and coordinated to the extent possible.

The Forward Budget for the MoH is based on the overall MoH development budget ceiling received from Treasury, which in turn is based on estimates of Gok revenues and donor contributions. As with the Recurrent Budget, these form the basis of the Draft Estimates, which are also reviewed and revised to fit the ceilings, and become the Printed Estimates published in June. These can then be revised again within the financial year, with reallocations between projects or line items by permission of the Treasury. The revised budget is printed in September as the Supplementary Estimates, and represents the final development budget of the MoH.

The Ministry of Planning, together with the line ministries such as the MoH, is now using a tool called the Public Investment Programme (PIP), which covers 3 years and is meant to link the district plans with forward budgets. The PIP also serves as a database and monitoring tool for all projects being implemented, containing the line item breakdown by financial year for every project, and also enables funds to be shifted if necessary to meet revised budget ceilings.

Financial information, particularly concerning actual expenditures, is very difficult to obtain. One reason for this is the multiple sources of revenue (Recurrent Vote, Development Vote, and Cost-Sharing) are all the responsibility of different departments at Afya House, and are managed and accounted for in different ways all the way down to district level. Drug supply distribution also is a separate channel. Selected financial information should be integrated into an improved Management Information System. This may be facilitated by an increasing awareness and ability to perform routine costing of MoH services.

According to DHMTs and donors alike, the biggest problem facing development projects and routine operations of the MoH is the difficulty and delays in getting disbursements from the District Treasury. This is true even when all paperwork is in order and funds are available, and the problem seems to lie in the District Commissioner's office. This will be a difficult problem to tackle. Some donors have resorted to pressuring the Ministry of Planning to allow separate accounts to be set up at central and district level.

6.7 PRICING AND AFFORDABILITY OF USER CHARGES

6.7.1 Equity and Cost-Sharing in Kenya

The question of whether people can afford to pay user charges at government health facilities is an extremely complex one. The issue is crucial because government policy of providing health care for the most vulnerable segments of the population will have failed if people are denied access to care at public facilities because of inability to pay.

In fact, seeking treatment is rarely without cost, even at "free" facilities, since there are usually transport and opportunity costs. And if the "free" care is of poor quality, there will be costs to the patient who must buy drugs at a private pharmacy, go elsewhere for laboratory tests, etc. Thus user fees at the time of service do not necessarily have a deterrent effect. When the Registration Fee was introduced in 1989 in Kenya, outpatient attendances at indicator provincial hospitals dropped by 27%, and rose again after the fee was suspended, but not by the same amount. This demonstrated to some that relatively small fees (Kshs. 20, equivalent to about US$0.80 then) could deter some people from seeking treatment. Yet when the same fee level was reintroduced as the Treatment Fee, the level of attendance only dropped by 6%, showing that perceptions of the value they were receiving for their money had a strong influence on patients' behaviour.

On the other hand, another study (Ref. 15) found sharp decreases from 13% to 42% in outpatient attendance in a poor rural district (Kibwezi) when the Registration Fee was introduced, and a corresponding increase in the use of NGO facilities. When the fee was

removed the patterns of use reversed again and returned nearly to previous levels. The use of preventive services was unaffected by the introduction and removal of the fees, which applied only to curative services.

Affordability, undefined by itself, has several dimensions, sometimes called "ability" and "willingness" to pay, although the hazy definition of these terms has rendered them fairly useless when it comes to actual policy decisions. The extremely low price elasticity of demand found to exist for curative care means that most people are willing to pay almost any named price to be cured when they or their child is actually sick.[1] In practice, it is more fruitful to examine three other affordability factors: a) what present or future consumption people would have to give up if required to pay a given price, b) how the price asked compares to the price of alternatives ("relative affordability") taking into account non-cash costs such as time and opportunity costs, and c) what provision is made if someone has no means at all to pay and no access to credit.

6.7.2 Income Distribution in the Study Area

A useful starting point at this question is through income distribution. Data is available from the 1994 Welfare Measurement Survey, which although is the best household data available, is not regarded as a particularly reliable survey. The data shows significant differences in household income between districts (and also for per capita income, since mean household sizes are similar), with Nyamira and Gucha (Migori) much worse off than Bomet, Kericho, and Kisii. Bomet households have exceptionally high agricultural income, while income from employment is highest in Kisii. Cash expenditures on food average between 40% and 50% of household income in the Study districts. This is a fairly low figure for sub-Saharan Africa, and suggests that most households can afford some of the other necessities as clothing, fuel, transport, gifts, school fees, farm costs, and household assets.

Table 6.22: Household income from different sources and medical expenditures (Kshs.)

District	*Annual* per capita income	Monthly wages, salaries, profits	Other non-agricultural income	Agricultural income	Crop income	Medical care expenses	Percentage spent on medical care	Total monthly household income
Kisii	23733.7	3870.7	1778	1767.6	1658.1	553.6	5.5%	10074
Nyamira	16230.9	2413.2	1024.6	1655.8	513.4	411	7.3%	5607
Kericho	29415.4	2511.4	882.5	1945.9	2028.7	231.7	2.2%	10368
Bomet	25823.6	3057.1	1262.1	5773.9	1172.3	233.7	2.1%	11265
Migori (Gucha)	19498.7	1585.5	1540.3	2874.4	641	269.6	4.1%	6641
Total Kenya	27403	4941.1	1497.2	2108.4	1149.3	347.1	3.6%	9696

Source: Ref. 14

The national average of medical expenditures as a percentage of household income of 3.6% is low for sub-Saharan Africa. A typical outpatient visit at a MoH health centre might cost

[1] Prospective questioning, that is, asking people how much they would be willing to pay, works well for some social services such as education or water, but asking them how much they would be willing to pay for treatment when they are not sick yields unreliable results.

about Kshs. 20, plus up to Kshs. 50 more if transport or additional drugs purchase were involved, for a total of perhaps Kshs. 100, which is from 1 to 2 percent of mean monthly household income. The mean level of expenditure of 4% could result from two or three household members falling sick in one month. Hospital admissions are much costlier, but also much rarer events that would tend to raise this percentage above the average. The indication from the gross population income data, therefore, is that the current fees in MoH facilities are affordable. The percentage for the JICA Study Area is somewhat higher, but there is no obvious explanation for the large differences between districts.

Another approach sometimes used to assess affordability in rural areas is to compare the cost of an outpatient visit with an average day's agricultural wage. In Kericho, tea-pickers earn Kshs. 150 per day, which is higher than the cost of a MoH outpatient visit, so the cost might be called affordable, but other agricultural workers may earn less. Still another approach is to compare the treatment cost with the cost of a bottle of beer or soft drink, 50 or 13 Kshs. respectively. Another indication of willingness to pay, if not ability, comes from Ref. 16, which found that the poorest income quintile spends more than three times as much on visits to private facilities as in government facilities. Finally, one recent observer (Ref. 39) comments that if patients can afford to pay tips to MoH hospital staff, they could afford to pay higher official fees so the hospitals could be improved.

As for relative affordability, in rural parts of the Study Area an outpatient visit to a private clinic cost from 300 to 400 Kshs., and the average cost of an outpatient visit to Tenwek Hospital was Kshs. 232, including medicines, so again the MoH outpatient fees appear affordable.

An equity problem arises because income is not distributed equally in the population. The table below shows income distributions in the Study Area.

Table 6.23: Income distributions based on national annual household expenditure quintiles

District	0 to 26,827	26,828 to 45,214	45,215 to 68,029	68,030 to 109,732	> 109,733 Kshs./yr
Kisii	5.7%	15.6%	24.2%	23.9%	30.5%
Nyamira	17.2%	25.2%	18.6%	18.7%	20.3%
Kericho	14.5%	23.6%	23.8%	25.7%	12.4%
Bomet	13.2%	25.4%	16.2%	23.4%	21.8%
Migori (Gucha)	14.8%	17.7%	25.2%	18.6%	18.7%

Source: Ref. 14

This table indicates that although the wealthier districts of Kericho and Kisii have nearly identical average household incomes, Kisii has a low proportion of very poor people (1st quintile) and a high proportion of wealthy people (5th quintile), while Kericho has more households in the middle ranges. Bomet, which is slightly wealthier as a whole, has an income distribution that lies in between these two. The two poorest districts, Nyamira and Migori (Gucha), tend to have a more even income distribution. This type of information is useful in predicting the proportion of patients who should be eligible for a waiver of charges.

In Kisii, the waiver target could be set rather low, and in fact this might explain the good success Kisii Hospital has had in collecting fees from patients.

Further analysis of this data shows that, on a national level, even though expenditures on treatment increase with income, the poor in rural areas (as shown in Table 6.18 for the population of Nyamira) pay a higher proportion of their total household expenditure on medical costs than others. This is true in many developing countries, because the need for health services by the poor is nearly as high as by the wealthy, and in rural areas the choice of provider is often limited, so all income groups tend to consume the same amount and type of services, and if few waivers are granted all groups tend to pay about the same for these services.[2]

Most of the preceding tends to suggest that many people would be willing and able to pay more than the present fee levels for government health services in the Study Areas. This would be especially true if some significant degree of quality improvement were made. Income survey data can be useful in setting user charges, For example, one analysis (Ref. 44) found that if fees do not exceed 2 to 3 percent of household non-food expenditures they will have no significant effect on utilisation of services.

Food Poverty

Access to food is another perspective that should be taken into account in a discussion of affordability. Nationally, per capita GDP had trended downward since 1990, by about 2% per year, with a similar effect on real wages in all sectors including farming. Using as a benchmark of food poverty a 2250 calorie minimum diet, 37% or the rural population was classified as poor (Ref. 41). The poorest 20% of the rural Kenyan population exists on less than Kshs. 2235 per month, so whereas the total cost of an outpatient visit of 100 Kshs. represents only 1% of an *average* household's income, it is about 4% of an average *poor* household's income. This family would typically be spending 75-80% of its income on food, so paying for two or three such illnesses per month could seriously affect their short-term nutritional status. This is why many people (*most*, according to some surveys) use cheaper sources of treatment first, such as drugs from peddlers and traditional herbal cures, especially when physical access to facilities is poor (Ref. 26). Using the same definition as above, these cures are "relatively affordable". The poorest will use these even when they have good access to health facilities that charge a fee, or even to a (free) dispensary when walking time and opportunity costs are significant.

Using an absolute income/expenditure poverty line approach, (Ref. 41), 46% of the rural and 29% of the urban Kenyan population is poor. Using an arbitrary benchmark of 1/3 of the mean consumption expense, it was estimated that 20% of the rural and 25% of the urban population was poor. (1992 data). By economic group, 36% of cash crop farming households were poor, 46% of food crop farmers, 47% of subsistence farmers, 42% of pastoralists, 16% of public sector employees, 31% of private sector employees, and 41% of informal sector workers. For female-headed households, 44% were ranked very poor and 35% poor, vs. 21% very poor and 38% poor for male-headed households.

[2] The situation is different in urban areas, where the wealthy tend to have more minor illnesses than the poor, and tend to use more expensive private providers.

Poverty, as defined by various methods in several areas of Western Kenya including the study sites, ranges from 45% to 65% of households. 65% of Kericho's households were considered as poor, and in Kisii 46% of households.

Thus far, there appears to be a large grey area in the estimation of the proportion of the rural population that cannot afford to pay small cash fees for curative services, ranging from perhaps 5% to as high as 60%. The fact that some people pay higher fees in the private sector may only indicate that a segment of the population exists that can afford these higher fees. It has also been found (JICA Study Team, and Refs. 6 and 38) that in MoH cost-sharing facilities and community revolving fund schemes such as the Bamako Initiative, waivers for the poor are hardly ever granted.

Since the fact is that those who are assumed to be unable to pay are actually required to, and *usually do* pay, what does this imply for estimating affordability? This will be difficult to answer without specialised research into household finance and solidarity mechanisms, but in other African countries it has been found that since people place highest immediate priority on getting well, and are aware that they will have to pay official (and unofficial) fees, the poor manage somehow to beg or borrow the money, do extra work, do without a meal (coincidentally, the cost of a day's nutritional food is around Kshs. 50), or sell something.

Conventional poverty measures indicate that additional expenditures from the household budgets of a substantial percentage of the districts' households could have a negative effect on nutritional status. All of the above data show that there are important economic differences between districts, even ones that are near to each other. This supports the idea that fees should be set on a decentralised basis. Decisions about waivers and exemptions should be made in the same way. It is difficult to tell exactly what fee levels are "affordable" however, without testing them first.

6.7.3. Adjusting Fee Levels

An analysis of the user fee schedule was done in July 1996 for the FIF Implementation Committee (Ref. 1). The main findings were as follows:

> User fees had not been increased since 1 October 1994. *They still have not been increased as of late 1997.*
>
> Revenues from user fees had decreased in real terms due to inflation during this time. *With the slowing of inflation in 1996 and 1997, this effect has not been as severe, but it is still significant.*
>
> A long-term strategy is needed for regular review and adjustment of user fees. This should include recovery of an increasing proportion of costs.
>
> Fee increases must be simple, practical, justified and easily explainable to patients by the health staff.
>
> A decrease in the number of exempt categories should be considered.

The report recommended that as of October 1996, fees should be adjusted for past inflation to bring them back to their original levels in real terms, plus an adjustment for future inflation anticipated up to the point of the next scheduled fee increase. Inflation from 1 Oct 1994 to 30 June 1996 was 28.9%. Assuming Fiscal Year 1996 and 1997 inflation to be 12% per year, the compound total of inflation from 1 October 1994 to 30 June 1998 is 61.6%.

It was also recommended that market conditions should be taken into account when adjusting fees. In this respect, it was noted that 1) private facilities in Nairobi charge fees 10 to 20 times those of the MoH; 2) Kenyatta National Hospital adjusts fees according to their budget shortfall rather than systematically against a specific target; 3) private facilities and KNH have detailed fee schedules and often charge per service and procedure in addition to daily ward or room charges which are meant only to cover catering and nursing costs.

It was suggested that fees should also be related to the actual costs of delivering services, requiring periodic costing studies. The most recent costing study was the Curative Services Financing Gap Study (Ref. 22, discussed earlier).

A suggested revised schedule of fees was presented for three levels in the MoH system (PGH, DGH, and HC). Some of these increased fees have been adopted; others have not, at least officially. Notably, the outpatient fee schedule proposed for adoption on 1 Oct. 96 has not been adopted. This would have set outpatient treatment fees at 50, 40, and 20 Kshs for PGH, DGH, and HCs respectively. This would have allowed recovery of 24% and 45% of total outpatient *costs* at PGHs and DGHs, respectively (assuming 100% collection rates). The proposed increased inpatient fees of Kshs. 70 and 50 would allow recovery of 26% and 21% of inpatient costs at PGHs and DGHs respectively. It is important to note that these recovery levels also correspond to approximately the full cost of drugs, one of the more important variable costs.

The report also addressed reducing the number of exempt categories, but concluded that there was insufficient information on the revenues foregone from exemptions to make a decision about this.

In general, the recommendations in this report were well-considered and moderate. In practice, they seem to have run into opposition and were not implemented. This is unfortunate, because a series of small adjustments would have been much more acceptable to the public than one or two large ones that are now needed to bring the fees back to their real levels prior to inflation. However, there is clearly a trade-off between the acceptability of small increases and the administrative complication resulting from the frequent changes needed.

In the future it will be important to put an administrative mechanism in place that would make these increases a routine matter, including policies that reflect inflationary trends, pre-printed fee circulars and other tools that facilitate FIF bookkeeping, prepared newspaper announcements, etc. Sensitisation of the community to the need to raise fees was mentioned most often by MoH staff as a necessity of the cost-sharing program. A regular period should established for these reviews and changes - yearly is probably too infrequent, while quarterly may be too frequent.

Setting cost-recovery targets involves a trade-off between the financial needs of the system and the ability to pay of the users. Inevitably, there is a large gap between the two. According to current thinking, the key to any improvements in this area is that fee revenues actually do result in improved quality of services, so that increased patient satisfaction is translated into continued willingness to pay and increased provider satisfaction results in greater willingness to maintain cost-effective standards. In the short run and when subsidies are limited, revenues from user fees should at least cover variable costs. If the price per unit of service is below variable costs, then the deficit or "gap" grows with each additional unit of treatment and subsidies will have to increase with increases in utilisation. If revenues from user fees are sufficient to cover variable costs, then the public budget can be redirected to paying for fixed expenses of quality and cost-effectiveness improvements. If revenues from user fees are greater than variable costs, then surpluses can be used to further enhance the services or to reduce the need for public subsidies.

A further consideration in raising fees is that unless quality in the MoH facilities is improved, increased fees in government facilities will result in increased use of NGO facilities, with the possibility of overburdening them. Distance is also a consideration - it has been shown that rural patients will choose a more expensive but nearby provider over a distant one, even though it might be of low cost. They will also choose nearby low-quality facilities over distant higher-quality facilities.

6.7.4 Tenwek Hospital Payment Data

Tenwek Hospital in Bomet district has provided interesting objective information that, with some supplementary future research, could increase knowledge on affordability of health care in the JICA Study Area.

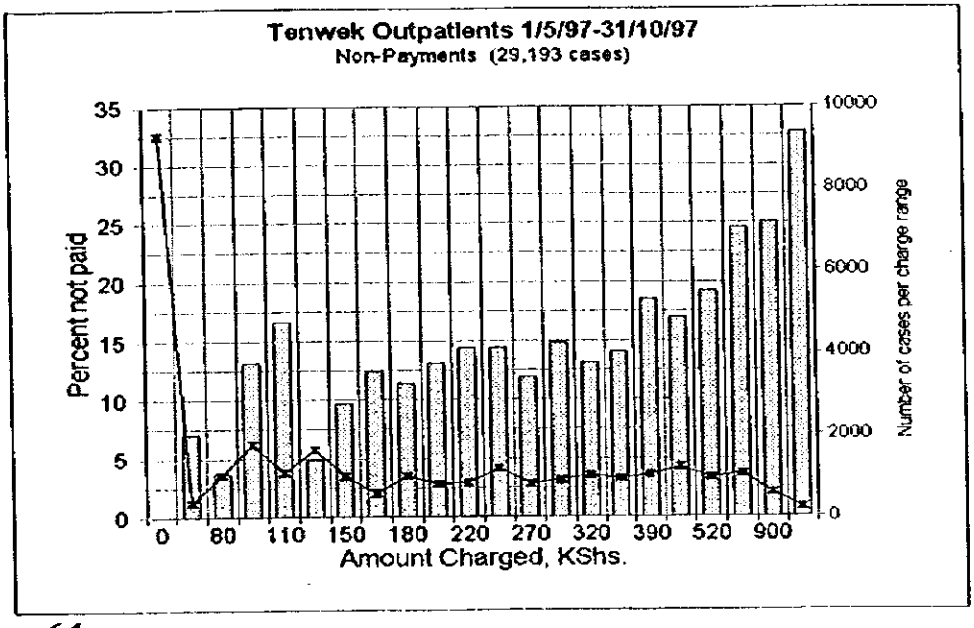

Figure 6.1

Tenwek Hospital is supported almost entirely by patient fees, and charges outpatient fees that are calculated to cover the actual cost of treatment. Fees are much higher than at MoH hospitals, but the quality of care is also superior. An outpatient consultation costs 80 Kshs. or 140 Kshs. plus drugs and ancillary services, for an average cost of 232

Kshs. Inpatient charges start at 350 Kshs. per day for bed, and can average several thousand for a typical stay. All patients are required to pay a partial deposit before seeing a provider, and after receiving their full treatment, all efforts are made to collect the rest of the bill. The hospital's policy is to treat everyone, however, and hospital staff make the decision, on the spot, whether to allow a patient who says he cannot pay all or some of the charge to leave without paying. All unpaid balances are recorded, and the patient is never considered to have received free treatment until it really appears that he cannot pay after several repeated attempts have been made to collect.

The billing department therefore has accurate records of every visit, how much their final bill was, and what proportion of it was paid. This data, for 10 months of 1997, when graphed yields what could be an *objective* measurement of ability to pay.

The outpatient data (Figure 6.1) seems to show a range between 40 Kshs. and 110 Kshs. in which it becomes progressively harder for patients to pay, and then a range of constant inability to pay (about 12%) up to Kshs. 350, where difficulty again starts to increase. It is hard to interpret these different segments without income data on these patients, but it is likely that mostly poor people have trouble paying in the lower range, 80 to 90% of patients can come up with between 100 to 400 Kshs., and then it is only the wealthier who can pay the highest amounts in full.

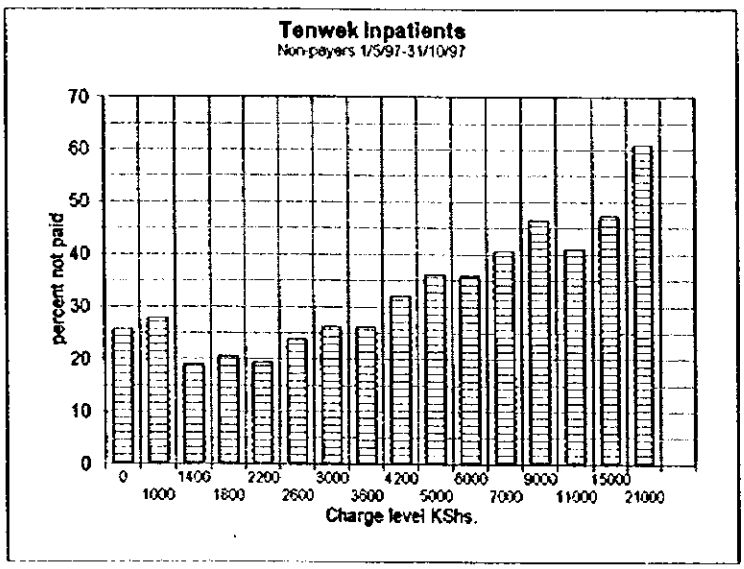

Figure 6.2

A somewhat different pattern is seen for inpatient charges (Figure 6.2), which are circumstantially different from outpatient visits because people know usually in advance that they will be admitted and can arrange to get the money one way or another. For inpatients, only about 20% of patients could not pay a 1000 Kshs. bill in full, with this figure rising steadily until at 20,000 Kshs. only half could pay their bills in full.

The question arises as to whether people who come to Tenwek represent the catchment area population, or if they are wealthier than average. The factors that make it likely that the patients are representative are that a) everyone knows that nobody is turned away, so

theoretically the poor should not be deterred; and b) the MoH district hospital is not currently admitting inpatients, so seriously sick people would probably not go there as outpatients. If this assumption is demonstrated to be false, then the following kind of data indicates, at minimum, willingness and ability to pay for high quality care by the segment of the population that chooses to use Tenwek for treatment.

As seen in Figure 6.3, the two data sets fit together reasonably well, and when displayed on a logarithmic scale indicate the affordability factor clearly: The outpatient leg suggests that the rate of non-payment would drop to 5 percent if the average charge were reduced to 80 Kshs., or would rise to 35% if raised to 3000 Kshs. Similarly the rate of non-payment for admissions would drop to 10% if the average cost were only 800 Kshs. It would be interesting to see if these compare well with the rates actually experienced at a hospital with these charges, such as the MoH Provincial hospitals.

There is a surprisingly wide range of information available that could be used to assess affordability of user fees. The most promising of these is the Tenwek Hospital data. If this is used to monitor affordability, it will be necessary to do a survey of patients to determine whether they are representative of the general population of the surrounding area.

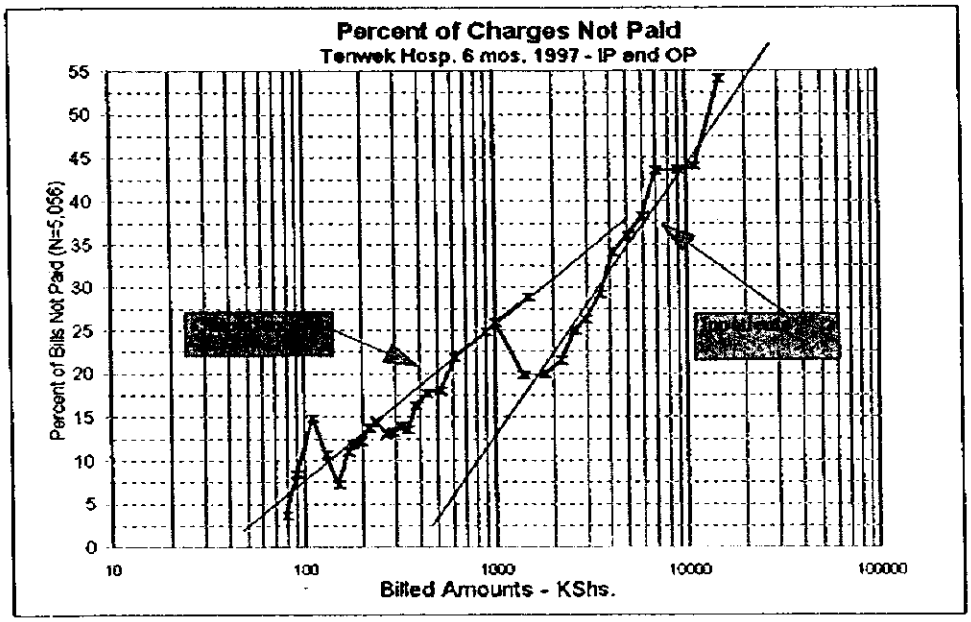

Figure 6.3

6.7.5 Protecting the Poor through Waivers

Difficulties in identifying the poor in health facilities has been noted by several observers (Ref. 28), and it has also been shown that protecting the poor is not usually done well in health systems that have introduced user fees. The main reason is that means-testing, which is readily done in information-rich industrialised countries with large formal employment sectors, is hardly possible at all in rural areas of developing countries where wage income is nearly non-existent. Attempts to find objective indicators of ability to pay such as land or

livestock ownership have been only partially successful (Refs. 28, 37). Widowhood and childlessness have been found in Kenya to correlate well with severe poverty, but these categories would include only a small fraction of the poor. In general, it has been found that identifying the poor for targeted waivers can be most effectively done in their own small communities where they are known by neighbours and community leaders. Mission hospitals such as Tenwek Hospital in the Study Area also seem to be able to identify those who cannot pay, with some having social workers on their staff for this purpose.

While a rate of fee waivers of only about 1% was actually found to have been granted in health facilities, Huber (Ref. 28) estimated from observations in S. Nyanza that between 11% and 34% of the population would actually be eligible for waivers on the grounds of poverty.

A recent study (Ref. 6) to determine whether equity of access to health services was maintained in the Kenyan health system under the cost-sharing program, looked in detail at how waivers and exemptions to official fees at government health facilities were being applied in practice. The study looked especially how waivers, the safety mechanism introduced to ensure the poor could receive treatment by a discretionary release from payment of user fees based on inability to pay, were working. (Exemptions are an automatic excuse from payment to ensure that certain desirable health services are used, or for certain types of patients such as under-fives and TB patients. The data were obtained from household surveys of the poor, patient exit interviews, and surveys of workers in public and private health facilities. The major findings were that the system is not working well:

Only 55% of the poor in rural areas and 86% in urban areas sought care.

60% of those using an alternative to a government facility did so due to costs or dissatisfaction with the service, or both.

Lack of knowledge about waivers for the poor was indicated, with a majority of the poor believing that everyone must pay for services at government facilities.

Almost all households knew of someone who recently had not sought care because of inability to pay.

On average, the poor travelled a greater distance to obtain care

Of those using government facilities, more than half had first sought treatment elsewhere for that episode of illness.

The poor sought out care sooner than the non-poor.

73% of the poor and 87% of the non-poor paid for their treatment on the same day.

There was no "leakage" of the waiver system - 100% of the waivers granted the day of the sample went to the poor. However, a third of the exemptions were accounted for by the poor and the remainder by the non-poor.

53% of the poor depended on family members to assist with the payment, and only 13% used their own money. 52% of the non-poor used their own money and savings.

Information about waivers was usually obtained informally from health staff, friends, or relatives.

Monitoring and record-keeping of waivers and exemptions was nearly non-existent.

Clinical staff were not involved in the decision process about waivers, and staff had not received any training in it.

In NGO facilities there were more informal mechanisms that were successful both in protecting the poor and in raising significant levels of revenue. These included good recordkeeping and monitoring systems.

The study concluded that because the waiver system is so unreliable, exemptions cannot be eliminated since they provide a degree of protection to the poor. Waivers cannot be eliminated either, because it would be impossible to devise exemptions that adequately protect the poor.

Specific improvements needed include: a national public information campaign to advise the public on exemptions, and on waivers for the poor. Adequate training for health staff is also needed; social workers should be placed in provincial hospitals; District Health Management Boards and District Health Management Teams should be encouraged to publicise the exemption and waiver system locally; and much better records should be kept.

Data suggests that fees would be more equitable if they were set locally according to local ability to pay. To the above recommendations could be added the need to do local level research (similar to the Tenwek non-payment data, or facility exit interviews) to assess the appropriate level of exemptions to be granted. Focus group discussions might reveal population characteristics that might be associated with poverty but easy to recognise, such as widowhood or childlessness.

The Study Team's field investigations confirmed that very few waivers were granted on grounds of poverty, ranging from 1% to 5% at sampled facilities in the Study Area. Increasing overall fee levels while increasing the rate of granting waivers to closer the estimated required level of 20 to 30%, should have the effect of increasing overall revenues while improving protection of the poor, and also reducing the degree of objection from the poorer classes of the population.

6.7.6 Projecting Cost-Sharing Revenues In the Study Area

A simple model is shown below for predicting the level of cost-sharing contributions to the non-wage budget for any particular area for any future year. Assumptions can be entered about the rate of increase of collections, the rate of increase in average fee levels (weighted over all services and levels of care), and about the expected waiver rate. The example below uses some actual data and some estimates for rural health facilities in the Study Area, but is only shown to demonstrate what types of information and targets are needed to make revenue projections.

Figure 4: Example of use of a spreadsheet model for predicting cost-sharing revenues

COST-RECOVERY PREDICTION MODEL		data type
Example: Average RHF in Study Area		
1997 revenue	101,234	input data
Percent of target collection	25	input data
Percent waivers now granted	4	input data
Target revenues if no waivers and 100% collection	421,133	calculated
Annual % fee increase	15	enter assumption
Increased full target revenues in 1 yr.	484,303	calculated
Target Year	2000	enter assumption
Annual % collection increase	15	enter assumption
Expected waiver percentage by target year	20	enter assumption
Expected collections by Target Year	271,210	calculated
1997 Non-wage budget	673,563	input data
1997 collections as % of non-wage budget	15.0%	calculated
Budget growth rate %	5	input data
Target year non-wage budget	774,597	calculated
Collections as % of non-wage budget in Target Year	35.0%	calculated

Source: JICA Study Team

A tool such as this spreadsheet model can place the effects of raising fees (and adjusting waiver levels) in a realistic context of the "financing gap" for the district. In the above example, raising the collection rate by 15% per year and the average fee levels by 15% a year would produce cost-sharing revenues equal to 35% of the non-wage budget by the target year. This would fill roughly half of the "PHC financing gap", which was estimated at 66% of the non-wage budget.

District decision-makers would then know how much of an additional gap they would have to fill by means of reallocating resources. Since the district hospital consumes about 63% of the district budget, and about 75% of this is for staff costs, under a block grant system about 47% of an entire district's grant would go towards paying for district hospital staff salaries and benefits. A reduction in this amount of only 5% could increase the financing of RHF by 7%, and if all of this were to be used for to non-wage expenditures, RHF non-wage financing (currently about 30% of the total), it would be increased by 21%, or half the estimated gap. The 5% reduction could be phased over several years. A reduction in the hospital workload due to improved services at health centres and dispensaries, and other improvements in the conditions of service, would make it possible to reallocate staff.

Clearly, the management of financial and human resources is closely linked with planning and budgeting management functions, which will gradually become the primary responsibility of the DHMBs and DHMTs under decentralisation. Management skills and the overall number of management personnel will need to be increased in order to realise any significant improvements over the present system.

6.8 ALTERNATIVE RESOURCE MOBILIZATION

6.8.1 Community financing: The largest scale experiment in community financing in Kenya has been the Bamako Initiative (Ref. 38). While regarded by many as a failure, it did demonstrate that communities can in fact be mobilised and can take action for themselves. The main problem, according to UNICEF's own analysis, is that the program started out as community pharmacies and never developed beyond that. Although it worked through the Health Sector Reform program, it was isolated from the cost-sharing program. Efforts to move into the provision of impregnated bednets also failed because of high cost, and the technical reason of the nets being ineffective in areas of high transmission. A comprehensive evaluation of the program found that some communities achieved substantial successes in the operation of their revolving funds, but a depletion of funds was equally common. Some of the over 300 sites evolved into independent operations and still are in operation, while others remained dependent on outside supervision and financial support. The BI will be refocused toward community nutrition and restarted in 1999.

6.8.2 Prepayment/Managed Care: An experiment of prepayment was carried out in 1988 with a coffee-growers cooperative in Meru (Ref. 27). All relevant factors of the potentially-covered population were measured, including average expenditures on health care, which was 322 Kshs per household per two months, corresponding to 5.32 visits by household members in the same period. Household heads were asked if they were willing to pay various amounts as prepayment to cover all costs, but the mean amount found was much lower than the point at which the scheme would be economically viable.

Several NGOs have since tested other types of HMO or prepayment-type schemes. The best known is at Chogoria mission hospital (Ref. 32). This is apparently working well, but has not been evaluated. The Community Health service at Tenwek Hospital has tested community opinion and found it very receptive to this approach.

6.8.3 Community Drug Funds: The UNICEF-sponsored Bamako Initiative in Kenya operated nearly 300 sites in about half the districts. Many of these community-based projects have survived, but the project as a whole was a mixed success. Apart from major central management problems, the community level activities failed because of an unrealistic expectation of CHWs to work for free or very little, and for donor subsidies to continue indefinitely. There was also donor pressure to keep prices for essential drugs and bednets below market levels, and this proved unsustainable. Significantly, other schemes exist now in which drugs are procured locally and marked up so they actually cost more than in the market, but the schemes are well-supported by the local population because they provide a reliable supply of drugs in the community, saving people long journeys to buy medicines.

Local supply of drugs (i.e., relying on existing commercial distribution networks) is a useful alternative to a centrally-run government-financed system, and at least should be thought of as a backup in case of failure of the latter. Although there are questions of the quality of drugs on the market in Kenya, market drug prices do not appear to be unreasonably high. A brief sample survey made on the outskirts of Nairobi found the following prices, which are compared with marked-up prices charged at Tenwek Hospital, which gets good quality generics drugs through the non-profit MEDS cooperative. Tenwek drugs are purchased through MEDS, so represent good quality generics. The sales price is 40% above cost for

items under Kshs. 100. Chemists' retail prices include approximately 30% mark-up over wholesale, and are mostly locally made drugs or Indian/Chinese/Egyptian imports.

Retail chemists' prices are as often as not lower than non-profit NGO prices, but the quality of the drugs is perhaps questionable. The most obvious example of extreme pricing is for Fansidar, which is commonly sold in courses of 3 tablets for between 60 and 80 Kshs., or 7 to 8 times the NGO price. This would have implications for any malaria control program. Some classes of drugs such as IVs and anaesthetics were found (Ref. 11) to be priced 70% to 95% higher than CMS (MSCU) prices, but it was also noted that the latter were subsidised and not fully costed for transport, storage, etc.

Other community-level cost-sharing: some dispensaries, although mainly health centres, have started their own local funds, typically charging 10 or 20 Kshs. per visit (not per episode). The FINNIDA community project in Western Province has been turned over to the communities and the MoH. It has been noted that in areas where community drug schemes are active, less attention might be paid to making the official cost-sharing system work well, and in fact cost-sharing performance in Western Province was poorer than average. Results are more money collected in some cases than official cost-sharing system. The poor cost-sharing results might be due to a transition to decentralisation: Western is the first province to be decentralised. Cost-sharing funds are banked at the district HQ and then AIEs are requested and issued from Kakamega. The system is said to be working well, with much faster turnaround for AIEs and higher collection level than before.

Another idea that could be implemented under a more decentralised user charge policy is a surcharge for injections. This would address several serious problems: many patients prefer to have injections, when an oral drug is equally effective, and many insist, and will make an extra unofficial payment. Since the injectable is invariably more expensive, this is an extra cost to the system, and also results in rapid depletion of injectibles when they might be needed for acute cases. If the official charge schedule included a significant surcharge for injections when not strictly needed, this would return the private payment to the FIF, and also could reduce the demand for them if high enough.

6.8.4 Privatisation: To reduce the curative subsidy by the Gok to wealthier people, the Health Reform Agenda calls for an increased role for the private sector and NGOs in providing curative health care for the portion of the population that can afford to pay for it. Apart from reducing the (now minimal) barriers to entry, it is not at all clear what measures can be taken to encourage the expansion of the private sector, or whether this is really an appropriate emphasis. In some countries the rise of the private health sector has led to the defection of the best-trained staff from the public sector and increased pilferage of MoH drugs. However, it could have a beneficial effect in Kenya if it helped increase coverage in rural areas, or helped to absorb excess MoH staff. Pricing policy in MoH facilities would have an important effect on the private sector, where low MoH prices would tend to discourage entry into the health market.

In the past several years the KHCFP has been focussing on managing a new partnership between MoH facilities and private health sector managed care programs. The most advanced of these relationships is between African Air Rescue (AAR) and some MoH hospitals, in which privately insured patients can be treated in government hospitals, with a reimbursement made by the insurer to the hospital under a type of managed care system.

Several such schemes have been launched within the past year. It is likely that this arrangement will provide some significant source of income per patient for the MoH, but the overall numbers of privately insured patients is rather small, and the proportion using public hospitals will be significant only in areas not served by private hospitals.

6.8.5 Local Tax Revenues: Most districts collect and retain a small amount of revenue from local taxes. In the Study Area the major ones are the Business License Tax and the Tea Cess. The former is levied on individual businesses and is meant to pay for some municipal services, including health. In most of the Study Area districts, however, there are currently no municipal health services. The Tea Cess (also a smaller Maize Cess, etc.) is levied to pay for maintenance of roads used mainly by tea plantations, and most of the revenue is said to be collected from the large operations such as Brooke Bond. Whether these local tax revenues could be mobilised for health services is an unknown. Certainly taxes are a very sensitive issue at present, and even if the business tax is currently not being used on the intended health services, there is no reason to believe that any part of it would be left available for health. Raising the rate could be acceptable *after* a visible improvement in services has been demonstrated. The Tea Cess could in principle be applied to improve roads in tea-growing areas, and is a better possibility due to currently high tea production levels.

Given the above findings on the potential for increased revenues from cost-sharing, and on the advantages of reallocating resources, an excellent strategy would be to use both approaches. The details of how they could be accomplished need not be spelled out completely at this point, but it is critical that both are planned to occur over a period of several years, with targets set and progress monitored. Above all, it will be necessary to raise the skill level of district managers to facilitate this critical part of the Reform Agenda.

After some period of time, it will become clearer whether other types of resources can be mobilised. The potential of community health schemes to reduce the burden on the health system should be monitored at the same time they are being implemented. Careful financial management will require an accurate information system, which includes costs and levels of services delivered everywhere in the MoH system, and preferably also at NGO and private facilities.

6.9 PLANNING DIRECTIONS

6.9.1 New Management Requirements at District Level

All of the above findings and implications lead to certain implications for the JICA Project for Strengthening District Health Systems in the Western Part of Kenya. The central one is that as decentralisation is implemented under Health Sector Reform, the management responsibilities of the DHB, DHMB, and DHMT, will increase enormously.

As the system might be expected to evolve, the central MoH will be responsible for establishing general policies and performing certain regulatory functions, while the provinces and districts will have responsibility for maintaining the health of their populations. To accomplish this, they will be given most of the financial resources that they currently receive through Treasury budget votes as block grants, and the mandate to raise additional amounts

locally. Existing health and support staff will be re-employed directly (by district and sub-district hospitals using some of the grant, while others will remain central MoH civil servants. It will be largely up to the districts to use these resources in a way that will have the maximum impact on health.

As has been shown in this chapter, the management challenges will include the re-allocation of resources and the mobilisation of additional resources. Strengthening preventive/promotive activities and the most cost-effective disease treatments would, in theory, have a large impact on reducing morbidity and mortality. The rural population must be better served, which means strengthening the rural health facilities and increasing the number of effective community health programmes. Unless a significant amount of new additional resources can be generated, this would require a significant re-allocation of existing resources, away from hospitals and expensive curative activities.

Mobilising additional resources will require a significant improvement of the cost-sharing system, with regular systematic reviews of pricing and waiver policies. This in turn will need some system to assess the local ability to pay, the local competitive situation, and the improvement of collection and use of funds at all levels of health facilities. Local facility management boards will need to be strengthened and trained. Policies and plans must be developed to direct patients away from seeking the more costly hospital-based treatment, to less costly but equally effective treatment at health centres and dispensaries. The district health system must be considered by its managers as a whole, interlinked network, in which each element has an important role to play and must be supplied with resources and management support.

New revenue sources can be generated through innovative approaches like community pharmacies, prepayment schemes, and even local taxation. Local communities can play an important role in the critical effort to make the health centres and dispensaries more attractive places for trained staff to work. At the same time, encouraging community-based PHC approaches will reduce the workload at the hospitals, allowing more distribution of current hospital-based financial and human resources.

Because of the high degree of vested interests in maintaining good urban and curative services, to succeed in reallocating resources will require a high level of management and administrative skills which currently do not exist in the districts. The same requirements will exist for the mobilisation of additional resources through cost sharing and community approaches.

6.9.2 JICA Project Inputs

These requirements will be met under mostly through the Continuing Education Project Component, and the above requirements will define the training needed. Management skills will be needed in the areas of health planning and financing, and in financial management. Strategic and long-term planning approaches will be needed, which can be taught through short courses or seminars that address specific planning tasks.

Under the Strengthening District Health Systems Project Component, a long-term management advisor could also be assigned to help establish an appropriate management

system model at district headquarters, and would direct project resources for achieving the new management objectives.

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