

SIDA Evaluation Report, Health, Kenya.

1986/3, part II-III

FROM HOSPITALS TO HEALTH CENTRES

**A Joint Evaluation of Swedish Assistance to Health Sector
Development in Kenya 1969-1985, parts II and III.**



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The views and interpretations expressed in this report are those of the authors and should not be attributed to the Swedish International Development Authority, SIDA.

Copies of this report can be obtained free of charge from SIDA in Stockholm.

The SIDA Evaluation Report Series is published by SIDA's Evaluation Section. General Editor: **Karlis Goppers.**
ALLF 171 6 171.
Printed by: Fälth's Tryckeri, Värnamo 1986.



SWEDISH INTERNATIONAL DEVELOPMENT AUTHORITY
S-105 25 STOCKHOLM, TELEX 11450 sida sthlm
ISBN 91-586-7075-0
ISSN 0283-0736

FROM HOSPITALS TO HEALTH CENTRES

Evaluation of Swedish Assistance to Health Sector Development in Kenya 1969-1985, Parts II and III

PART II: Six Health Centres in Kenya - Findings of a Field Study during March 1985

PART III: Health Services in Kenya - Macroanalysis of Facilities, Services and Resources

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The two reports in this volume are the result of an evaluation mission undertaken jointly by SIDA and the Kenyan Ministry of Health during March 1985.

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Cover design: Marie Louise Hedman

Cover photo: Lorenz Christensen

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LIST OF ABBREVIATIONS

AIE	- Authority to Incure Expenditure
AMREF	- The African Medical and Research Foundation
ANC	- Antenatal Care
BCG	- Bacillus Calmette Guérin
BP	- Blood Pressure
B/S	- Blood/Stool
CBDC	- Community-Based Distribution of Contraceptives
CBHC	- Community-Based Health Care
CE	- Continuing Education
CN	- Community Nurse
CO	- Clinical Officer
CWC	- Child Welfare Clinic
DANIDA	- Danish International Development Agency
DHMT	- District Health Management Team
DMO	- District Medical Officer
DPT	- Diphteria Pertussis Tetanus
ECN	- Enrolled Community Nurse
EN	- Enrolled Nurse
EN/M	- Enrolled Nurse/Midwife
FHFE	- Family Health Field Educator
FP	- Family Planning
HC	- Health Centre
HIS	- Health Information System
HUT	- Health Unit Team
IDA	- International Development Association
IRM/FP	- Integrated Rural Health and Family Planning
IUD(IUCD)	- Intra-Uterine Contraceptive Device
KEPI	- Kenya Expanded Programme of Immunization
LT	- Laboratory Technician
MCH	- Maternal Child Health
MO	- Medical Officer
MoH	- Ministry of Health
MoW	- Ministry of Work

NFW	- Nutrition Field Worker
NGOs	- Non-Governmental Organizations
ODA	- Overseas Development Administration
OP	- Outpatient
OPD	- Outpatient Department
PA	- Patient Attendant
PFEO	- Principal Finance and Establishment Officer
PGH	- Provincial General Hospital
PHC	- Primary Health Care
PHN	- Public Health Nurse
PHO	- Public Health Officer
PHT	- Public Health Technician
RHC	- Rural Health Centre
RHDP	- Rural Health Development Project
RHU	- Rural Health Unit
RN/M	- Registered Nurse/Midwife
RHF	- Rural Health Facility
SC	- Statistical Clerk
SDP	- Service Delivery Point
SIDA	- Swedish International Development Authority
SS	- Subordinate Staff
STDs	- Sexually Transmitted Diseases
TB	- Tuberculosis
TBA	- Traditional Birth Attendant
TT	- Tetanus Toxoid
UNFPA	- United Nations Fund for Polulation Activities
UNICEF	- United Nations Children's Fund
USAID	- United States Agency for International Development
URTI	- Upper Respiratory Tract Infection
UTI	- Urinary Tract Infection
VIP	- Ventilated Improved Pit latrine

SIX HEALTH CENTRES IN KENYA - FINDINGS OF A FIELD STUDY DURING MARCH 1985

SUMMARY

The overall objective of the field study was to assess the rural health services on health centre level. A second objective was to assess how the SIDA supported activities have contributed to the improvement of rural services.

The field study was supposed to supplement the analysis on a national level, presented in part I of the Evaluation Report. It was seen as a means of giving insight into the circumstances on local level, i.e. where SIDA support is ultimately reflected.

A selection of SIDA supported health centre construction projects was made on the basis of how other SIDA programmes had been implemented. These programmes were; the Essential Drug Programme, the Continuing Education Programme, Family Planning Activities and the Community-based Health Programme. When selecting the health centres, the distance to Nairobi was also considered.

The SIDA supported health centres were compared with un-upgraded, ordinary health centres in the same districts. Part of the evaluation team visited six rural health centres, developed questionnaires and check-lists, made observations and semi-structured interviews with almost all staff members. Several data sources were used, and one reason for this was to minimize systematic errors and biases.

The evaluation team found it of particular interest to study how the physical upgrading of the health centres had affected the service in different ways and if the upgrading had attracted specific categories of staff.

Some findings:

The study shows that there exist some differences between upgraded and un-upgraded health centres with regard to equipment and physical status. Generally, the upgraded centres offer the staff members better prerequisites for a good health care:

- Due to better laboratory facilities, the upgraded health centres could carry out a wider variety of tests;
- the physical facilities for the family planning activities were acceptable only in the upgraded centres. Only in these, could the client get the necessary privacy;
- management and planning functioned better in the upgraded centres.

This was mainly due to the fact that the officers in charge had participated in the so-called Health Unit Team Training together with other health workers at the centres. However, the physical planning of the health centre was often a necessary prerequisite for an adequate planning of the service;

- the upgraded centres had a Landrover, a fact which improved the possibilities to transfer patients, when needed. One Landrover was, however, not enough to carry out necessary field visits.

Furthermore, the evaluation team made the following general observations:

- The total number of health workers matched quite well the amount of work in all the studied centres;
- clinical assessment, i.e. examinations, diagnoses and prescriptions of drugs were performed correctly in almost all health centres. The same applied to sterilization of instruments;
- family planning was offered at all health centres and the service was integrated into the rest of the activities. All staff members were positive towards family planning. As a rule, the family planning methods were, however, not particularly in demand by the clients and some of the methods were obviously unpopular.
- the Essential Drug Programme had reached all the studied health centres. The most important advantage of the drug system was that drugs were available most of the time, according to the staff interviewed. The most serious disadvantage was that the composition of the kits was not adjusted to the specific health needs of the area.
- in all health centres, the staff considered the lack of transport a serious constraint in connection with far-outreaching activities.

1 INTRODUCTION

This report presents the findings of a field study of six Rural Health Centres (HCs) in Kenya. The study was part of the evaluation of Swedish assistance to the health sector development in Kenya 1969-85 (see "From Hospitals to Health Centres, part 1").

The overall objective of the field study was to assess the rural health services at the health centre level, with the intention to document achievements and shortcomings in the on-going rural health services. A second objective was to assess whether the SIDA supported activities have contributed to the achievements in the rural health services.

1.1 THE ORGANIZATION OF THE RURAL HEALTH SERVICES

The health services in Kenya are organized in geographically defined administrative units, so-called Rural Health Units (RHUs). The forty districts of the country (Nairobi district excluded) are subdivided into 254 RHUs, each serving an average population of 70,000 people, although with great variations. In each of the districts there is a District Medical Officer of health (DMO) who supervises the activity of the RHUs. At his command is a technical and an administrative team.

The RHU concept includes a series of interrelated services, run and maintained at several levels; the local community level, the dispensary level, health sub-centre and health centre levels.

At the community level preventive and promotive activities are carried out by community health workers and community health committees. At the dispensary level, primary curative work and environmental health activities are undertaken by 2-3 Enrolled Community Nurses (ECNs.), one Public Health Technician (PHT) and 2-5 Subordinate Staff (SS). At health centre level, curative, preventive and promotive services to individuals and community are offered. The normative staff of HCs are the following: 1 Clinical Officer (CO), 5 ECNs, 1 Public Health Officer (PHO), 1 PHT, 2 Family Health Field Educators (FHFES), 1 Laboratory

Technician (LT), 1 Statistical Clerk (SC), 1 Driver (D) and 11 SSs. Health sub-centres are subordinated to HCs and have fewer personnel. They provide, however, the same services as health centres except in-patient services. The RHU concept also includes mobile health units.

One of the RHUs health facilities, a hospital or a health centre, functions as the headquarter of the RHU. The headquarter offers support and technical supervision to the staff at the Rural Health Facilities (RHF), i.e. dispensaries and HCs, within the RHU.

1.1.1 Upgrading of Rural Health Centres

The Ministry of Health has successfully got external funds for the implementation of an upgrading programme for rural health facilities. SIDA has been one of the main contributors, both regarding technical assistance and funds for construction.

As a measure of the impact of these SIDA supported activities, a comparison was made between three upgraded and three un-upgraded rural health centres.

1.2 METHODOLOGY

A selection of rural health centres was made by the evaluation team and Senior Officers from the Ministry of Health (MoH). Three SIDA supported health centre construction units were chosen. These were Kinunga HC in Nyeri District, Kangema HC in Muranga District and Amukura HC in Busia District. The basic criterion for the selection of these health centres was the implementation of different SIDA programmes. The HC in Amukura was also chosen because of the long distance from Nairobi.

In order to be able to make fruitful comparisons, un-upgraded, ordinary health centres located in the same districts as the upgraded HCs, were included in the study. These were Othaya HC in Nyeri District, Kandara HC in Muranga District and Kocholia HC in Busia District. The distances to the district headquarters were just about the same for each selected health centre.

The evaluation team spent about one whole day in each health centre.

The purpose of the visit was to:

- collect general information, such as staff pattern, patient workload, population in the catchment area,
- analyze the planning and management process,
- inspect the premises,
- assess the quality of the rural health services by observing the work of selected health workers (i.e. the nursing procedure, the clinical assessment and the environmental health),
- assess transport management
- assess drug supplies
- assess maternal, child and family planning activities
- analyze community obligation and involvement by interviewing local people in their homes.

Each member of the team wrote a summary of the findings from the specific area he or she had studied. The results from all six HCs were compared by Carl-Gunnar Eriksson and will be presented in the following chapter.

Detailed information about each of the six health centres can be obtained from Dr Carl-Gunnar Eriksson, c/o Research and Policy Division, SIDA, Stockholm.

2 BASIC FUNCTIONS IN THE HEALTH CENTRES

In this chapter a comparison between upgraded and un-upgraded health centres is made, related to the purpose of the field study described in chapter 1. The six visited health centres, upgraded respectively un-upgraded, distributed by province and district are presented in table 2.1.

Table 2.1: Upgraded and un-upgraded health centres distributed by province and district.

Province:	Central	Central	Western
District:	Nyeri	Muranga	Busia
Upgraded:	Kinunga HC	Kangema HC	Amukura HC
Un-upgraded:	Othaya HC	Kandara HC	Kocholia HC

2.1 MANPOWER, TRAINING AND CONTINUING EDUCATION

The staffing of the Health Centres is a very essential component. The general impression from the field visits was that the staff was highly motivated to deliver the services to the population in the catchment areas, even in situations with a lot of constraints. The staffing pattern of the six Health Centres is shown in Table 2.2, where also the staffing norm is given.

Table 2.2: Staffing patterns in six Health Centres and the MoH Staffing Norm for Health Centres

Cadre	Kinunga	Othaya	Kangema	Kandara	Amukura	Kocholia	Norm
Medical Officer (MO)	-	1	-	-	-	-	-
Clinical Officer (CO)	2	2	1	1	1	1	1
Registered Nurse (RN)	-	3	-	-	-	-	-
Enrolled Community Nurse (ECN)	3	15	7	8	3	2	5
Enrolled Nurse (EN)	3				3	4	
Nutrition Field Worker (NFW)	1	-	1	-	1	1	-
Family Health Field Educator (FHFE)	2	-	-	2	-	1	2
Laboratory Technician (LT)	2	1	2	1	1	1	1
Statistical Clerk (SC)	1	1	2	1	2	1	1
Driver (D)	1	1	-	1	1	1	1
Public Health Officer (PHO)	-	-	-	1	-	1	1
Public Health Technician (PHT)	2	1	1	2	2	1	1
Subordinate Staff (SS)	11	10	11	11	9	4	11
Total	28	35	25	28	23	18	24

The staffing patterns were very similar to the staffing norm, with a few exceptions. Very seldom a PHO and enough FHFEs were deployed at the health centres. Too many nurses were deployed, but a revision of the staffing norm for nurses may be necessary, as the demand for nurses is often very high.

The staffing pattern in Othaya Health Centre was exceptional, i.e. both a MO and three Registered Nurses had been posted to that station. The total number of health workers matched the different work loads fairly good. The Othaya Health Centre was the most busy and Kocholia HC the least overcrowded.

The team interviewed about 60 % of the health workers excluding all subordinate staff and drivers. The median work experience varied slightly between the Health Centres and in four HC half of the interviewed staff had worked less than two years (Table 2.3).

Table 2.3: Median Work Experience and Period at the Different Stations

Rural Health Facility (RHF)	Work experience (years)	Period at the station (years)	(n)
Kinunga HC	4	1 1/2	11
Othaya HC	8	1	14
Kangema HC	7 1/2	2 1/2	10
Kandara HC	6	1	7
Amukura HC	4 1/2	1	12
Kocholia HC	6	5 1/2	8

A consequence of this high staff turnover may be lack of team work and also limited exposure of the health workers to different continuing education (CE) activities.

The participation in CE activities varied between 50 % and 88 % (Table 2.4), and it was correlated to the duration of the staff in the stations.

Table 2.4: Participation in CE Activities among eligible Groups of Health Workers

RHF	Any %	HUT ¹ train %	Refresher courses %	Drug Manage- ment, %	KEPI ² %	MCH/FP ³ %	CBHC ⁴ %	Other %
Kinunga HC	73	18	36	40	63	43	0	27
Othaya HC	71	14	31	9	45	18	0	31
Kangema HC	80	20	20	60	88	80	0	10
Kandara HC	71	0	29	0	80	75	0	14
Amukura HC	50	17	25	25	9	25	0	25
Kocholia HC	88	38	25	33	0	50	13	38
All HCs	71	18	26	23	44	41	2	23

1) Health Unit Team

2) Kenya Expanded Programme of Immunization

3) Maternal Child Health/Family Planning

4) Community Based Health Care

The coverage was highest for KEPI, although the KEPI training had not started for HC staff in Busia. MCH/FP training had reached about 40 % of the target groups, and at least two had been trained in all HCs. The Drug Management Training had not reached the present target in Kandara HC where no health worker had been trained.

2.2 MANAGEMENT AND PLANNING

During the visits, the officers in charge were interviewed about the management and planning of the RHF and its services. The main observations in the six Health Centres were as follows:

Management and supervision within Kinunga HC seemed to function quite well. A management team was, however, not constituted. There was no health planning activity for the RHU.

The RHU concept¹⁾ did not seem to be very strong. Planning and coordination of preventive activities could be further developed,

1) 1) The RHU concept embraces integrated health services at different levels (see 1.1).

although a lot of preventive work was actually carried out. The Health Information System and the external relations seemed to function well.

The MO in charge of Othaya HC had not been very long at the station, and he was relatively inexperienced. Management and supervision seemed to be totally curative-oriented. A management team was not constituted. There were no health planning activities for the RHU apart from health programmes on worms and Sexually Transmitted Diseases (STD). The RHU concept did not function at all. Preventive work was neglected; there were no FHEs, the PHTs worked very much in isolation. The Health Information System (HIS) was in a mess.

Management and supervision within the Kangema HC appeared to function quite well. A kind of management team was meeting regularly. Health planning activities for the area had been carried out, although quite a number of years ago. The RHU concept was very much weakened, since there was no vehicle available. Some preventive work was carried out outside the HC by the Public Health Technician and The Nutritionist. The curative facilities available were not fully utilized, because of lack of qualified staff and lack of supply (dressing material). The Health Information System seemed to be in working order but the record keeping could be much improved. External relations seemed to function well.

The Kandara HC was operating under very difficult conditions. The building was very old, supply inadequate and the Health Centre gave the impression of being neglected by the district officers.

The CO in charge was relatively young and inexperienced, but was trying to get the HC to function. A management team was not constituted. There were a few health planning activities. The RHU concept did not work at all. Coordination between curative and preventive work seemed to be weak. The HIS was only partly functioning due to lack of stationary. The external relations appeared, however, to be in good order.

In Amukura HC the management and planning activities were running very well. All staff members met once every week during one hour. The nursing staff rotated between different stations within the health centre every two weeks. Due to lack of transports, the RHU concept did

not function. The Health Information System was working quite well. External relations seemed to be good.

In Kocholia HC a major survey was carried out in 1982, covering the sub-location. The concept of team work existed and all staff members met regularly every third month. Management and supervision operated quite well, the relationships with other sectors were very cordial.

There was generally a better management and planning in Health Centres where the officer in charge and several other health workers had participated in the Health Unit Team Training.

2.3 CLINICAL ASSESSMENT

During the field visits the handling of clinical cases were observed with regard to staff handling of patients in Muranga and Busia districts.

2.3.1 Muranga District

At both Kangema and Kandara Health Centres where the performance of a clinical officer and nurse, respectively, were assessed, the approach to the patient, history taking, examination, diagnosis and prescription of drugs were performed well. In both cases, however, health education to the patients was very unsatisfactory. In both HCs, patients expressed satisfaction with the treatment received and instructions given.

2.3.2 Busia District

At both Amukura and Kocholia Health Centres the performance of the Clinical Officer was observed. In general the approach to the patient and history taking were satisfactory. At one Centre the physical examination was hampered by the lack of batteries for the auriscope. At the same centre three different medicines (Penicillin, Aspirin and Oral Rehydration Salts) were prescribed for a child with normal temperature and without signs of dehydration. This overprescription may have been influenced by the presence of the foreign observer.

At the other Centre the patients history of fever, joint and body pains was assumed to be due to malaria which is very common in the area.

Whilst this may have been a reasonable assumption in this individual case, it raises some doubt about the accuracy of overall frequency of malaria diagnosed at the Centre.

2.4 NURSING PROCEDURES

During the visits to the six Health Centres, the nursing procedures were assessed by studying five different tasks. These tasks included sterilization, injection, dressing of wounds, dispensing of drugs and care of vaccines. The nurses responsible for these tasks were observed and interviewed. Sometimes the duties were performed by experienced patient attendants.

2.4.1 Sterilization

All Health Centres had at least one sterilizer. Othaya HC and Kangema HC both had an electrical sterilizer and a gas stove or pot. Kandara HC and Kocholia both had a charcoal stove. The sterilizing procedure was assessed with the assistance of a checklist composed of ten items. In addition, four questions were asked about sterilization. In Table 2.5 the results are summarized.

Table 2.5: Assessment of Sterilization Procedure and Knowledge

RHF	Cadre	Type of sterilizer	Procedure (0-10)	Knowledge (0-4)
Kinunga HC	CN	Gas stove	10	4
Othaya HC	EM	electrical + gas stove	8	3
Kangema HC	PA	electrical + gas stove	9	4
Kandara HC	CN	Charcoal stove	7	4
Amukura HC	ECN	Gas stove	6	2
Kocholia HC	ENM	Charcoal stove	10	3

The general impression was that the sterilization procedures were appropriately arranged, but the nurse interviewed in Amukura HC was not sure about the procedure. However, she was new at the station.

2.4.2 Injections and dressing of wounds

No injections were made at Kocholia HC because of lack of injectable drugs. In Amukura HC, they only had injectable chloridine, other injectables were lacking.

The injection procedures were very appropriate (Table 2.6). However, in Kinunga HC, there was no sterilizer in the injection room and the instruments were not kept sterile throughout the procedure.

The procedures of injections and dressing of wounds were both assessed with a checklist composed of nine items.

Table 2.6: Assessment of Injection Procedures and Dressing of Wounds

RHF	Cadre	Injection procedure (0-9)	Cadre	Dressing of wounds (0-9)
Kinunga HC	EN	7	EN	7
Othaya HC	EN	9		N/A
Kangema HC	PA	9	PA	7
Kandara HC	CN	9		N/A
Amukura HC	ECN	9	EN	9
Kocholia HC		N/A		N/A

In three of the visited Health Centres, no dressing of wounds was made due to lack of dressing materials (Table 2.6).

The assessment of the dressing procedure showed minor shortcomings, there was a shortage of necessary equipment, such as a sterilizer in the dressing room and a dressing bin with pedal.

2.4.3 Dispensing of Drugs and Care of Vaccines

All the Health Centres had been included in the new management system of drug supplies to RHF's. The dispensing of drugs were generally correct. Among the weaknesses were, explaining common side effects of medicines and checking if patients could repeat instructions given to them. The assessment is summarized in Table 2.7.

Table 2.7: Assessment of Dispensing of Drugs and Care of Vaccines

RHF	Cadre	Dispensing (0-5)	Cadre	Care of vaccines (0-9)
Kinunga HC	EN	5	ECN	9
Othaya HC	EN	3	EN	9
Kangena HC	PA	3	ECN	9
Kandara HC	PA	3	CN	9
Amukura HC	ECN	3	ECN	7
Kocholia HC	ENM	5		N/A

The care of vaccines was of high quality in the districts where KEPI¹⁾ training of Health Centre staff had been conducted. It was only in Busia that any deficiency was observed (Table 2.7).

In Kocholia HC the refrigerator was out of order since three weeks, but none of the HC staff had been trained in the maintenance of cold chain so far. In Busia district, only the Mid-level training had been implemented.

In summary the three SIDA supported HCs got higher scores in the nursing procedures. However, this observation was due to the fact that these Health Centres actually performed all the activities included in this assessment. In the three other, un-upgraded Health Centres, no dressing of wounds took place and in one HC no care of vaccine was observed due to the breakdown of the fridge.

2.5 MATERNAL CHILD HEALTH/FAMILY PLANNING (MCH/FP)

A very important part of the service offered at the RHCs is Maternal Child Health/Family Planning (MCH/FP). SIDA has contributed to the improvement of the MCH/FP services in both a direct and in an indirect way. The support consists of procurement of contraceptives, reconstruction of buildings and vehicles and equipment. SIDA has also supported training of Family Health Field Educators (FHFES). These

1) Kenya Expanded Programme of Immunization

activities are all together supposed to result in a MCH/FP service of good quality.

It is often difficult to abstract the effects of the SIDA supported activities from the role of other conditions. However, in some cases it is possible.

In the following section, the results from interviews with all personnel responsible for MCH/FP are presented. Constraints, impediments and possibilities to give a good MCH/FP service were discussed in the interviews.

By comparing HCs with different prerequisites regarding equipment and physical facilities, it was possible to analyze to what extent these conditions influenced the work and the staff's work motivation.

Some particular questions, concerning the family planning service, were formulated in the interviews with the intention to illustrate the correspondence between the SIDA policy for health sector support and the service offered.

2.5.1 Staff's background and views on MCH/FP

There was no evident difference in the experience of the MCH/FP staff between the studied HCs. The average work experience for the teams varied between 6 - 12 years. The goal for the MCH/FP programme had been to deploy at least two Family Health Field Educators, (FHFES), and two MCH/FP nurses to each HC, which were defined as full-time Service Delivery Points, (SDP)¹⁾. This requirement was more or less fulfilled in all the HCs in Central Province but not in the two HCs in the Western Province. This was partly due to the fact that the FHFES, who had been transferred to other RHCs or hospitals, had not been substituted. As to participation in continuing education courses, there was a variation. Participation was more common among the MCH/FP staff in the Central Province than in the Western Province. Given the province, the staff at upgraded HCs had participated in some more courses than the staff at un-upgraded HCs.

1) A "full-time SDP" provides a complete MCH/FP service

The perceptions of the categories which were the target groups for the family planning programme, did not vary with HC nor with participation in continuing education courses. Most of them said that the programme was meant for married couples and for single women with at least one child. Some of the interviewed did, however, consider that the programme was meant for anyone who needed it, but stressed that this was their personal view.

With a few exceptions, all MCH/FP staff members interviewed considered that it would be a good idea to teach secondary school children about family health and family planning as an integrated component of family life.

Regarding the norms for an ideal family size, the interviewed health workers showed a strongly unanimous opinion. About 60 % of them said that the ideal family size was 4 children and 30 % of them said it was about 4 children. A couple of the interviewed consider 1-2 children to be the ideal family size.

There was no evident difference in attitudes towards ideal family size between MCH/FP staff at upgraded respectively un-upgraded Health Centres.

All the interviewed mentioned that they were engaged in several of the activities at the HC. At Amukura, there was a systematic work rotation. There was a great variation of answers to the question of which task was the most important. The variation rather reflected individual interests and views among the staff within each HC, than differences between HCs. At several HCs no activity alone was considered to be outstanding important.

All the six studied HCs offered a full-time MCH/FP service, which meant that clients could receive all kinds of treatment and family planning service five days a week, all the day.

2.5.2 Common Constraints for the MCH/FP Services

There were some problems which affected almost all the activities at the HCs. That was lack of water, shortage of transports and electricity. Both the SIDA supported HC and the other RHC in Busia district lacked

water which aggravated the MCH/FP work, as well as the treatment. Transport was a common constraint and even in HCs supplied with a vehicle the FHFES and the nutritionists complained about transport problems as they normally had to visit homes and villages by foot.

At one of the SIDA supported HCs, the electricity was not yet installed and that caused a bit of trouble with deliveries at night when there was only one midwife in charge. Sterilizing instruments was also considered difficult without electricity among the staff at the HCs.

There were also problems which were specifically related to one or more of the activities, problems related with deliveries, immunization, nutrition education and antenatal and postnatal exams and treatment.

All the HCs studied had a maternity ward, but on our visits to the HCs there were few births. Amukura, with a ward recently opened was an exception with three births. Most of the births took place at home probably more in Busia District than in Nyeri and Muranga districts. The staff meant that this was very much due to lack of emergency transports.

Lack of linen, sanitary pads etc at the HCs resulted in a preference for pregnant women to stay at home or, if possible, go to the hospital for better treatment, according to the staff. In Muranga and Busia district, some nurses meant, that many pregnant women had more confidence in the traditional midwife of the village than in the nurses at the HC.

At Amukura, the staff was very pleased with the equipment for the maternity ward, but complained that the oxygen mask could not be used as there was no adapter for connection. Small necessities, like needles and cotton, were also missing.

At almost all the HCs, the staff pointed out that they had a peak season for deliveries when the wards were filled and, in general, two women had to share one bed.

At all the HCs, the staff found the immunization programme successful. Even if all mothers did not bring their children and if there were some drop-out families, the staff found it satisfactory, as the number of

children being immunized increased. All the interviewed expressed satisfaction with the KEPI programme¹⁾, although some were worried about the frequent breakdowns of the fridges and the absense of a repairman at the HC.

At the HCs without functioning vehicles, this fact also affected the immunization programme in a negative way, as they were dependent on other facilities for supplies.

Nutrition education was an important part of the MCH/FP programme in almost all the HCs studied, even if not all had a nutritionist. Where the physical facilities allowed it, lectures were held by the nutritionist, among others, in the morning while the patients waited for the Centre to open.

Lack of transport was one of the constraints mentioned among the nutritionists as one of their tasks was to follow-up families with malnourished children. Bikes or motorbikes would be the best solution to this problem, according to the interviewed.

The antenatal part of the programme was not considered as successful as the immunization programme. The interviewed staff meant that the women did not find the antenatal service of the same importance as the immunization. The percentage of pregnant women who came for antenatal service varied also, much due to varying transport facilities. In Busia, one of the HC's staff expressed anxiety of the reducing of mobile teams visiting the villages. This activity was considered necessary, particularly as there were no regular transport facilities in many of the sub-locations in the district.

2.5.3 Family Planning

All methods (except injections and surgical contraceptions) were offered at all the studied Hcs. There was no particular time reserved for family planning activities, but the service was offered whenever the Centre was open.

The emphasis on family planning might, however, differ between the HCs. At one of the Centres, there were a lot of posters informing of family

1) Kenya Expanded Programme of Immunization

planning while the other Centres hardly had any obvious sign of the activities.

It is evident, that the family planning service was integrated into the rest of the activities and that it played a rather secluded role in relation to treatment, immunization, nutrition and child welfare. The official policy was not to physically separate the family planning activities from the other activities, in order not to "stigmatize" the family planning clients. The physical facilities for the activities varied quite a bit between the SIDA supported HCs and the others. In the upgraded HCs the clients could get the privacy they needed. In one un-upgraded HC the family planning activities took place in the same room as the laboratory, a curtain across the room separated the two functions.

At four of the studied HCs the contraceptive kit had been introduced. Most of the staff found it suitable, while others did not find it completely adequate. At the HCs where they did not get the contraceptives in kits, the supply was not quite adequate and gloves, for instance, were often missing.

With exception for a special size of coils, contraceptives was as a rule available, according to the staff interviewed.

The most popular method in all HCs were the pills, followed by Intra-Uterine Devices (IUDs). Injections were also supposed to be popular. The most unpopular contraceptives were the condoms and the foam tablets. This was valid in all the HCs. The main reason for opposition to condoms and foam tablets was that men disliked these types of contraceptives, according to the staff interviewed. These results have strong similarities with results from earlier studies in Kenya.

The family planning programme was generally considered very important, but less successful. A couple of reasons for this was given by the staff. The most common reason mentioned was that people were not motivated. They knew that contraceptives exist, but there were also cultural constraints. Almost all interviewed said that the main objective with the FP programme, was child spacing, to get healthy children and mothers.

The staff interviewed often spontaneously expressed the importance of the work by Family Health Field Educators. They participate at barazas and they visit people in their homes. They educate the families in sanitation and nutrition, and, according to many of the staff members, all these aspects have to be considered if people shall be motivated for family planning.

The FHFES themselves considered their task very important, but they had difficulties in reaching remote places due to lack of transport. They claimed their need for motorbikes or bikes. They also believed that a uniform could strengthen their role and professional identity as well as it should give them a certain social prestige among the people.

The plans are, however, to substitute the cadre of FHFES with other community-based field workers. Thus, when a FHFE quits a HC, he or she is not replaced, and that was something which worried the staff at the Centres. One reason mentioned for ceasing to use FHFES, was that there had been conflicts between the FHFES and the rest of the clinical staff at the HCs, and that the salaries had not been adequate. In the interviews, however, we only got positive reactions towards the FHFES and very often the staff members spontaneously expressed their appreciations of the FHFES.

2.6 HEALTH EDUCATION AND NUTRITION

Only three of the Health Centres had Family Health Field Educators among their staff. In four Health Centres Nutritionists or Nutrition Field Workers (NFWs) were deployed. Only Othaya HC lacked both FHFE and NFW.

The first activity in the morning at the Health Centres was health education for the waiting patients. In Kinunga Health Centre, they had a weekly schedule:

Monday	FHFE on family planning,
Tuesday	NFW on nutrition,
Wednesday	FHFE on varying subjects,
Thursday	FHFE on varying subjects,
Friday	PHT on environmental health.

Each morning, about 30 minutes was spent on health education. The lecture was on essential food groups, nicely illustrated with food and of an impressing high quality soliciting participation by the audience. The waiting bay in-doors was very appropriate for this health education.

Similar health education activities took place in the other Health Centres. In Amukura HC, also nutrition was included in the education. In Othaya HC, the facility was not so conducive to health education because of the arrangement of patient flow. The emphasis on health education varied between the Health Centres.

In the interviews with the field workers, it appeared that health education in schools, homesteads, public meetings and barazas was carried out beside the health education of the Health Centres. FHFE covered a broad spectrum of issues, NFW mainly nutrition and PHT environmental sanitation and control of communicable diseases. However, lack of transport was mentioned as a common constraint. Language barrier was mentioned by some health workers, but the field workers generally knew the local languages.

2.7 ENVIRONMENTAL HEALTH

During the visits to the Health Centres Public Health Officers (PHOs) and Public Health Technicians (PHTs) were interviewed and their performance when inspecting a food premises was assessed. In all stations, except in Kinunga HC, environmental health was covered. In Kinunga, neither the PHT for the HC area nor the PHT working in the nearby sub-location were present at the visit.

When asked about activities they had been involved in during the past three months of work, the PHT reported between 3 and 5 of the following activities:

- inspected a carcass;
- inspected a school;
- checked building plan;
- gave health education;
- ordered vaccines;
- protected a water supply;
- inspected a food premises;

- supervised building of a latrine;
- served a legal notice;
- communicable disease control.

Few PHTs had adequate supply of tools, such as tape measure, spirit level, cement trowel, shovel or jembe. These tools were available only in Amukura HC. The PHTs at this Centre had also constructed a demonstration ventilated improved pit latrine.

Inspections of food premises by the PHTs were assessed using a checklist. The overall performance was acceptable.

The main constraint for the PHOs and the PHTs was lack of transport, which greatly reduced their efficiency. Lack of stationaries was mentioned by the interviewed PHOs as another constraint.

2.8 LABORATORY

All the six visited Health Centres had laboratory facilities. Each Health Centre had one laboratory technician except Kinunga HC and Kangema HC where two laboratory technicians were deployed in each. In Table 2.8 some of the types of tests carried out at the facilities are given.

Table 2.8: Types of Tests carried about at the six Health Centres

	Kinunga	Othaya	Kangema	Kandara	Amukura	Kocholia
Stool tricoscopy	yes	yes	yes	yes	yes	no
AFB Sputum	yes	yes	yes	no	no	no
Skin /leprosy	yes	yes	yes	no	no	no
B/S for parasites	yes	yes	yes	yes	yes	yes
Urine tests	yes	yes	yes	yes	yes	no
Urine sediments	yes	no	yes	yes	yes	no

The three Health Centres, which had received equipment procured by SIDA, had better laboratory facilities than the others. However, problems with the electrical supply were constraints to full usage of this equipment. In Kangema HC for example, they needed a bulb so they could use the electrical microscope. In Kocholia Health Centre, lack of water had made it impossible to carry out other tests than Blood/Stool, (B/S), for parasites and blood for H6, which both were badly needed.

As can be seen in Table 2.8, 16 of the 18 tests were carried out in the three SIDA supported HCs, compared to 10 in the other HCs. This was not dependent on the skills of the laboratory technicians as all could do a wider variety of tests, it depended on the lack of equipment, water or electrical supplies.

2.9 DRUGS

The new drug management system had by the end of 1984 been introduced in all the districts of Kenya, except Nairobi, which was not included at all in the system. There was no difference in the inclusion of the kit system between the HCs supported by SIDA and the others.

The first kit arrived to Kinunga and Othaya in January 1985, Kangema and Kandara in January 1983 and Amukura and Kocholia in January 1982. At most of the health centres visited, only one person had taken part in the continuing education course on drug management. In one of the Health Centres, there was nobody trained in the new drug management system. The overall impression was that when the new system was introduced at a HC, too few had got a thorough introduction to the system. It was often mentioned that there had been someone trained but that this person had been transferred.

The drug manual was available only in three of the six Health Centres. There were one or more instruction posters in all Centres. Some of the posters were put on walls close to the working place of the staff prescribing drugs. Where there was only one poster, this was always found in the CO's office. It was not asked how, or if, the posters were used in the daily work of the Centre. Neither was asked about the manuals.

The system for storage, recording, prescribing and dispensing drugs was more or less the same in all Centres visited. The CO or, in one case, the MO in charge was responsible for ordering drugs and for the safe and proper storage of drugs. He also arranged the dispensaries daily ration of drugs. The CO also prescribed drugs to patients seen by him. In one Centre, only the CO prescribed oral antibiotics. The nurses (EN, EIN, NFW) also prescribed drugs, mainly to under-fives in the MCH/FP clinic. A patient attendant or a nurse handed out drugs to the patients.

The dispensary had a room of its own in all but one Centre. Drugs were handed out to patients through a window. Drugs were packed in paper-cones, which were hand made in the Health Centres. The cones were mostly marked e.g. 2 x 3 days, in the local language, but sometimes the marking was missing.

Due to transport problems between the District Hospitals and the HCs the supply of new kits was irregular. As a consequence, shortage of at least some drugs was part of the ordinary situation at the HCs.

Whether more time was spent on drug handling with the new system, the answers varied. In the four Health Centres where the kit system was introduced some years ago, two of the COs in charge thought they spent more time on drugs than before - there was more recording to be done and there were more drugs. One CO in charge thought he spent less time, and the fourth CO in charge could not comment as he was new at the Centre and had only worked in a hospital before. Some of the nurses said that it had become necessary to ask the patients more before prescribing drugs, and thus more time was spent on handling drugs. Others found that it had become easier, they had learned more about the drugs and the supplies were more regular than before.

According to the interviewed staff the most important advantage of the system was that drugs were available most of the time at the Health Centres. This had caused an increase in the number of visitors.

One CO specified that the necessary drugs were there, especially those used for pregnant mothers, injectable drugs and eye ointments. Another CO mentioned, as very important, that ordering had become easier and yet another claimed, as an improvement, that the kit did not include so many different kinds of drugs.

The most important disadvantage mentioned by almost all of the interviewed was the kits composition which was not adjusted to the specific health needs of the area. Another disadvantage was that the HCs no longer could get drugs not included in the kit from the district hospitals.

Drugs proposed to be included in the kit system were in Central Province¹⁾:

- Christalline, penicillin,
- drugs for psychiatric use,
- more of syrups, anesthetics, Ephidrine and antihistamine,
- more kinds of antibiotics to avoid patients becoming resistant, and syrups mainly for children,
- injections to make it possible to go on with a cure started in hospital.

The only kind of drug missing mentioned in Kocholia, was antiasthmatics.

In Central Province, the Centres all meant they got too much chloroquine. In many Centres, they wanted dressings included in the kit. Only in Amukura none of the interviewed could see any disadvantage with the system.

In the Western Province, the ways suggested to improve the system were:

- to get more chloroquine,
- reintroduction of pethidiae for maternity cases,
- for hook worms; Alcopan,
- include I.V. supplies,
- exclude bilharzia drugs.

In Central Province they stressed the need to pack kits according to the needs of the area - maybe a "high-land kit" and some other types. Dressings should also be included.

Finally, the issue whether a small fee for drugs could be introduced was discussed. In Western Province, most were reluctant to introducing a fee - they mentioned that people might have problems to pay and that they were used to get the drugs free of charge. In Central Province, almost all interviewed thought that the introduction of a small fee would be a good idea. The community would be happy to pay, provided that the drugs they needed were supplied. A maximum sum of a few shillings was mentioned. Two health workers reminded, that there were some people who could not afford to pay. On the other hand, one nurse

1) Health Centres in Central Province were Kinunga, Othaya, Kangema and Kandara. Amukura and Kocholia were situated in Western Province.

claimed that some people ask for drugs just because they are free of charge at the HCs. With the introduction of a fee, she supposed that only the needy would ask for drugs.

2.9.1 Comments and Conclusion

According to the interviews, it was quite clear, that most staff in the Health Centres were positive to the new drug management system. The main reason was that patients had got more confidence in the Health Centres as drugs were available most of the time. Thus people more likely came for treatment.

It was also quite clear that the standardized kit had some limitations to most Health Centres, varying with the special disease-pattern of the area. Some staff mentioned, that with the old system it was possible to order missing drugs from the district hospital (although you didn't always get them). To have a few not very commonly used, but essential drugs in stock in the district hospital would thus probably be a good idea. Whether to introduce a fee on drugs or not, the main impression was that some were a little hesitant but nobody was entirely against the idea, and many thought the introduction of a fee would be a good idea to solve a very acute shortage situation.

2.10 OTHER SUPPLIES

The Health Centres need food supplies for the in-patients. However, in the visited Health Centres, the in-patient facilities seemed to be very under-utilized. Food for nutrition demonstrations was used by the nutritionist for health education.

A general shortage of dressing materials was observed in the six Health Centres. Although the patients were asked to bring materials to the treatment, this arrangement was not functioning. Several health workers suggested that dressing materials should be included in the kit system.

Shortage of stationaries was found in most Health Centres. It was especially mentioned by the statistical clerks and the public health workers.

These shortages of supplies were observed in all Health Centres.

2.11 TRANSPORT

A Health Centre needs transport facilities for carrying out a variety of functions. Among these functions are:

- transferring of both medical and maternity emergency cases to the District Hospital;
- transporting drugs and other stores;
- supervision of health services in RHEs within the rural health units; and
- delivery outreach and mobile services.

The Health Centre staff also need transport facilities for carrying out field work. The PHOs, PHTs, FHEs and NFWs complained about the lack of transport during the interviews.

The first group of functions needs a Landrover with facilities for transferring patients. Not all visited Health Centres had a vehicle although the SIDA assisted HCs had got a Landrover ambulance. The vehicle in Kangema was waiting to be repaired after an accident.

It is difficult to maintain the operations mentioned above, due to financial constraints. For instance, no mobile clinic was run due to lack of funds for petrol. Therefore, the implementation of the Rural Health Unit concept was jeopardized as no supervision from the Health Centre was possible.

The field workers suggested that a motorbike or sometimes a bicycle would improve their mobility considerably. Some of the field workers said during the interviews, that they could not reach large parts of the catchment area as the distance exceeded what was possible to travel by foot.

3 A SUMMARY OF DIFFERENCES AND SIMILARITIES

The study shows that there exist obvious differences between upgraded and un-upgraded health centres with regard to equipment and physical status. Generally, the upgraded centres offer the staff members better prerequisites for working, and the health care can be improved.

In other aspects, the differences between upgraded and un-upgraded health centres are less evident. Some examples are given below:

The staff from upgraded and un-upgraded health centres has participated in Continuing Education Courses to the same degree.

The total number of health workers matched the amount of work quite well in all the studied centres.

Clinical assessment, i.e. examinations, diagnoses and prescriptions of drugs were performed well in almost all the health centres. The same was valid for sterilization of instruments.

Family planning was offered at all the health centres, and the service was integrated into the rest of the activities. The staff members were generally very positive towards family planning activities.

The essential drug programme had reached all the studied health centres. No apparent differences were found between upgraded and un-upgraded centres as to storage, recording, prescribing and dispensing drugs. The most important advantage of the drug system was that drugs were available most of the time, according to the staff interviewed. The most serious disadvantage was that the composition of the kits was not adjusted to the specific health needs of the area.

The staff at all the centres complained of lack of transport for far-outreaching activities.

The most obvious differences between the upgraded and the un-upgraded health centres are almost all related to the physical status, transport and equipment available at the health centre.

The upgraded centres had a Landrover, which improved the possibilities to transfer patients when needed. A Landrover was, however, not enough to carry out necessary field work.

Due to better laboratory facilities the upgraded health centres could carry out a wider variety of tests.

Even if there was a shortage of dressing materials in all centres there was a complete lack of such materials at the un-upgraded centres.

The physical facilities for the family planning activities varied quite a bit between upgraded and un-upgraded centres. Only in the upgraded centres could the client get necessary privacy.

One striking difference was the management and planning, which was throughout much better in the upgraded health centres. However, this was mainly due to the fact that the officers in charge as well as other health workers had participated in the so-called Health Unit Team Training.

HEALTH SERVICES IN KENYA - MACROANALYSIS OF FACILITIES, SERVICES AND RESOURCES

SUMMARY

The Swedish health sector support to Kenya 1969-85 has changed from a project centered assistance to health sector assistance, and over the years a variety of activities have been supported.

The present report contains macro-level data on Health Services in Kenya regarding facilities, services and resources, with the aim of describing the context in which the SIDA assistance has taken place.

The overall objectives have been to collect data on

- organization of health services,
- health facilities,
- curative services,
- development expenditures and planning,
- recurrent expenditures; budgeting,
- staffing and manpower planning,
- transport and maintenance situation.

The main findings are the following:

- Since Independence there has been a substantial increase in the number of health institutions, particularly regarding dispensaries. The number of hospital beds and cots has also increased very much. However, there is some evidence that the distribution of health institutions is rather skew.
- Most of the development expenditures (73 %) have been used for Curative Health, i.e. expanding hospital services. Approximately 20 % has been spent on Rural Health Services + Preventive medicine. In the Development Plan 1984-88, 47 % of the total estimates for the period has been budgeted for Rural Health Services + Preventive Services. This is a substantial increase although budget estimates are not the same as actual expenditures.

- There are several problems on a strategic level like:

- o health facility strategy (hospital vs RHF),
- o donor policy,
- o HQ-organization.

The decentralization process to districts and the community participation efforts, may constitute additional planning and control problems.

- Distribution of recurrent expenditures (measured as total expenditures per capita) among provinces is very skewed. There is much evidence that recurrent resources should be more fairly distributed among districts and provinces. A bigger proportion should also be given to Rural Health Facilities (RHF).
- Although there is a lack of data and accessible records regarding staffing, there are some significant data indicating that hospitals are overstaffed and Rural Health Facilities understaffed. There is a case for reviewing the establishment for hospitals and RHF, and strengthening the procedures for posting, transferring, recording and reporting of staff.
- According to the Coopers and Lybrand Study in 1982 there are some problems of transport and vehicle maintenance which calls for action to be taken.

The maintenance problem, concerning buildings, has been recognized for a long time. Although the main responsibility for the maintenance is with the Ministry of Works, some follow-up and minor repair should take place within the Ministry of Health.

1 BACKGROUND; INTRODUCTION

As a part of a long-term plan for continuing evaluation of the Swedish development cooperation, it was decided to evaluate the Swedish health sector support to Kenya for the period 1969-1985. The study should be an evaluation of the assistance over the years as well as a means to be used in planning for new support.

The evaluation study as a whole was undertaken by a team from SIDA and the MoH supported by two external consultants. The team worked in Kenya March 7-29, 1985.

The health sector support to Kenya during the last fifteen years has changed from a project centered assistance to health sector assistance, and over the years a variety of activities have been supported. The evaluation team therefore chose to collect data at two levels: a) national level or macro-level and b) health centre and catchment area level, i.e. micro-level.

This is part III of the evaluation report. This part contains macro-level data on Health Services in Kenya as what concerns facilities, services and resources. The overall objective of the macro-analysis have been to describe the context - or the given conditions - in which the SIDA assistance has taken place.

Part III is not supposed to be read completely independent from part I, the main report. Neither is part III supposed to give a complete and integrated picture of health services in Kenya. Part III is more to be seen as a number of appendices to part I, the main report.

The objectives for part III have been to collect data on

- organization of health services,
- health facilities,
- curative services (out-put),
- development expenditures and planning,
- recurrent expenditures; budgeting,
- staffing and manpower planning,
- transport and maintenance situation,

thereby giving an overall picture of health services in Kenya and also indicating some problems in providing these services.

The methods used have been a combination of statistical analysis of data accessible in or provided by the MoH and also inventing some previous studies undertaken in Kenya.

This report (part III) has been written by Ralf Jonsson, Consultant, SIDA with special assistance from Charles Thube, Ministry of Health, Kenya.

The study was also made possible by the valuable cooperation of many officers at the MoH Headquarters in Nairobi, for which we are very grateful.

2 ORGANIZATION OF HEALTH SERVICES

2.1 GOVERNMENT SERVICES (Source: IHR/FP-project)

The Ministry of Health (MoH), where policy and administrative decisions are made, is at the centre. The civil service head of the Ministry is the Permanent Secretary, and the professional branch is headed by the Director of Medical Services. At the provincial level the Provincial Medical Officer is responsible for all the health services. In each district, health services are administered by a District Medical Officer of Health.

In 1970 the Central Government took over rural health services, which until then had been administered by local authorities, with a view of reorganizing and standardizing them. The first steps in the development of a systematic model for the provision of rural health services were taken in 1972, when the MoH introduced the concept of Rural Health Unit (RHU), a geographically defined health administration unit within the district. The country's 40 districts (i.e. excluding Nairobi district) were subdivided into 254 RHUs. The average population per RHU is presently about 70,000 but there are wide variations. Each RHU was to have one of its health facilities, preferably a Rural Health Centre (RHC) or hospital, designated as the RHU headquarters. Staff at RHU headquarters were to provide technical supervision and support to the staff of the other rural health facilities (RHF) in their RHU and hold regular

clinics in those RHF's. The RHU headquarters was to serve as the immediate referral point for other RHF's in the RHU. Six rural health training centres were established in the mid-1970s to provide team training for RHU staff. In the typical RHU, a RHC is the centre of a cluster of several dispensaries which provide first contact outpatient curative services and, in a few cases, maternal and child health (MCH) care and family planning (FP). In general, dispensaries are heavily utilized.

A dispensary is usually staffed by an Enrolled Community Nurse (ECN) and a patient attendant, but in some areas dispensaries are often staffed by patient attendants only.

RHCs provide dispensary-type services to the surrounding population and also serve as referral points for dispensary patients. They provide a wider range of outpatient curative services than dispensaries and usually a full range of MCH/FP services. RHCs also provide limited in-patient services; they have small maternity units (usually 12 beds) for normal obstetrics, and a few observation beds where patients can be held for a day or two to determine whether transfer to a hospital is necessary. Health centres perform very limited minor surgery, all other surgical cases being transferred to hospitals. Each RHC is headed by a Clinical Officer (CO) - a paramedical trained for three and a half years to perform most of the functions normally performed by physicians in developed countries.

The main referral points for RHF's (i.e. dispensaries and RHCs) are district hospitals, which provide a wider range of outpatient services, as well as pediatric, medical, general surgical and obstetrical and gynecological in-patient services.

2.2 DISTRICT FOCUS (SOURCE: DEVELOPMENT PLAN 1984-88)

The responsibility for planning and implementing rural development is being shifted from the headquarters of ministries to the districts. This organizational strategy has become known as the "District Focus for Rural Development". It is based on the principle of a complementary relationship between the ministries, representing a sectoral approach to development, and the districts where the various sectors are joined in common support of rural development activities. Responsibility for the operational aspects of district-specific rural development projects is

being delegated to the districts. Responsibility for broad policy, and the planning and implementation of multi-district and national programmes will remain with the ministries. The objective is to broaden the base of rural development and encourage local initiatives that will complement the ministries' role in order to improve problem identification, resource mobilization, and project implementation at the local level.

The ministries will work with the districts both on local projects and on multi-district and national programmes. Projects (or local components of larger programmes) that are primarily intended to serve one district, or part of a district, are referred to as "district-specific", and are to be chosen, planned and implemented at the district level.

Activities that cover more than one district, or serve national purposes, are the responsibility of the relevant ministry, although district-specific sub-components of these activities will be implemented, if not totally planned, at the district level.

2.3 NON-GOVERNMENTAL ORGANIZATIONS

The Non-Governmental Organizations (NGOs) that provide health care facilities are principally private hospital institutions, Church Missions and doctors in private practice.

The private hospitals are usually owned through "trust" arrangements and financed through the fees they charge for medical services together with a rebate of up to Shs 135.00¹⁾ a day for patients who contribute to the National Hospital Insurance Fund. These hospitals do not receive any grants from the Government.

The majority of Church Mission health facilities are organized and run by the Protestant Churches Medical Association and the Kenya Catholic Secretariat, who provide hospital services, dispensaries and mobile clinics. These NGOs are provided with a subsidy amounting to about 4 % of the MoH budget in 1980/81, whilst revenues from service fees and drugs charges finance about 75 % of the recurrent cost of mission health facilities. The missions tend to spread their efforts to rural and isolated areas, where they often provide the only accessible health care facility. The outstanding difference between Government and Mission

1) Approx. 80 SEK. The rate of exchange which has been used in the evaluation equals 100 KShs to 59 SEK.

health services and hospitals is the fee charged by the latter. This does not however, seem to lessen the demand for utilization of the Mission health services.

The National Hospital Insurance Scheme is a compulsory one for all persons resident in Kenya who have attained the age of 18 years and whose income are KShs 1,000/= per month, KShs 3,000/= per quarter or KShs 12,000/= per annum. However, in 1972, the law was amended to allow persons whose incomes were below KShs 1,000/= per month, KShs 3,000/= per quarter or KShs 12,000/= per annum to elect to become members and, thereby, have the opportunity of enjoying benefits similar to those enjoyed by the compulsory contributors.

The law requires all contributors to pay a standard contribution of KShs 20/= per month which is paid by purchasing stamps specially printed for the purpose and affixing them on the card every month for 12 months. The scheme applies to all persons, both men and women, who have attained the requisite age of 18 years.

3 HEALTH FACILITIES

3.1 NUMBER OF HEALTH FACILITIES; TRENDS

3.1.1 Number of Institutions

The following table illustrates development and increase in number of all health institutions in Kenya 1963-82.

Table 3.1: Health Institutions in Kenya 1963-82

Type of institution	1963	1982
Hospitals	148	218
Health Centres	160	274
Dispensaries	Few	1184

Source: Development Plan 1984-88

Comments: Since Independence there has been a substantial increase in the total (government + mission + private) number of health

institutions, particularly regarding dispensaries. This means that as an average in a district in Kenya there are 5 hospitals, 7 health centres and 29 dispensaries. However, there are of course wide variations in different districts, depending on population, areas and other situational factors. It must however be remembered that the definition of hospitals is not very clear, some NGO hospitals are very small.

3.1.2 Number of Hospital Beds and Cots

The following table illustrates development and increase in number of beds and cots in Government and Mission hospitals.

Table 3.2: Number of Beds and Cots in Hospitals and per 100,000 population 1963-83

	1963	1973	1975	1980	1983
Total number of beds and cots	8683	-	-	-	29294
Number of beds/cots per 100,000 population	76	78	94	174	156

Source: Economic survey 1984

Comments: The total number of hospital beds and cots has more than tripled since Independence. Out of the total number of beds for 1983 the Government provided approximately 60 %. Although a rapid increase in population has taken place, the number of beds/cots per 100,000 population has doubled during the same period. However, this figure has somewhat decreased during the period 1980-83.

3.2 DISTRIBUTION OF HEALTH FACILITIES

3.2.1 Health Institutions by Ownership

The following table has been compiled from data in the Health Information system and illustrates the distribution of different types of health institutions by ownership.

Table 3.3: Distribution of Health Institutions (1st January 1983) by Ownership

OWNERSHIP	Different types of Institutions						All Institutions	
	Hospitals		Health Centres		Dispensaries		No.	%
	No.	%	No.	%	No.	%	No.	%
Government	83	39	237	88	784	70	1104	69
Mission	83	39	31	11	202	18	316	20
Private/others	45	22	2	1	131	12	178	11
TOTAL	211	100	270	100	1117	100	1598	100

Source: The Health Information System

Comments: Concerning health centres in particular but even dispensaries, the Government is the dominating provider of services (88 % respectively 70 %). However, the distribution of hospitals is very different; the Government is the owner of less than 40 % of the hospitals. This fact clearly underlines the situation that health planning in the Government sector can not be carried out in isolation from the Missions and the private sector.

3.2.2 Health Institutions by Provinces

The following table has been compiled from data in the Health Information System and illustrates the distribution of different types of health insitutions by provinces including Government, Mission and Private facilities.

Table 3.4: Distribution of Health Institutions (1st January 1983) by Provinces

PROVINCE	Type of Institution			All Institutions	Land area km ² per institut	Population per institut
	Hospitals	Health Centres	Dispensaries			
Nairobi	16	8	81	105	-	-
Central	44	38	179	261	51	10,791
Coast	22	23	133	178	467	9,113
Eastern	26	33	189	248	628	13,261
North Eastern	3	5	12	20	6,345	23,139
Nyanza	36	35	129	200	63	16,949
Rift Valley	49	89	356	494	346	8,015
Western	15	39	38	92	89	23,777
All Provinces	211	270	1,117	1,598	358	11,749

Source: The Health Information System

Comments: The calculation of population per institution is an indicator of average work-load in the health institutions, particularly outpatient services. Average work-load seems to be very high in Western and North Eastern, high in Nyanza and Coast. All other provinces are better off.

The calculation of land area (km²) per institution is an indicator of average (geographical) access to health institutions. Average access seems extremely poor in North Eastern province. Also in Eastern, Coast and Rift Valley average access is poor compared to the very good access in Central Nyanza and Western.

3.2.3 Rural Health Centre Coverage by Province

A more direct indication of accessibility for the majority of the population is provided by the figures in the table below, which show by province the percentage distribution of households (in rural areas) within given distances of a Rural Health Facility.

Table 3.5: Percentage Distribution of Households by Distance from a Rural Health Facility, by Province

Distance	Central	Coast	Eastern	Nyanza	Rift Valley	Western	All Provinces
0-1 km	0.7	1.6	4.6	9.0	3.7	7.1	4.8
1-2 kms	13.4	3.2	7.3	9.1	12.7	14.0	10.7
2-4 kms	35.1	33.1	18.1	30.0	25.3	21.7	26.9
4-8 kms	43.3	29.7	26.5	33.7	31.2	28.8	34.2
8+ kms	7.5	32.6	43.5	18.2	27.1	18.5	23.5

Source: Integrated Rural Survey 2 (Unpublished), 1977

Comments: For the country as a whole about 42 % of households are within 4 kms of a RHF and about 77 % within 8 kms, which is quite good by regional standards. The percentage of households farther than 8 kms from a RHF ranges from 7.5 % in Central Province to 43.5 % in Eastern Province. As might be expected, RHF's are more accessible in the three densely populated provinces (Central, Nyanza and Western) than in the three sparsely populated provinces (Coast, Eastern and Rift Valley).

3.2.4 Number of Hospital Beds and Cots by Province

The following table shows the distribution of the number of hospital beds/cots by provinces as well as the average number of beds/cots per population.

PROVINCE	Hospital Beds and Cots	
	No. of beds and cots	No. per 100,000 population
Nairobi	5,598	534
Coast	2,930	181
Eastern	3,882	118
North Eastern	366	79
Central	4,512	160
Rift Valley	5,212	132
Nyanza	4,066	120
Western	2,728	125
All Provinces	29,294	156

Source: Economic Survey 1984

Comments: Nairobi is far better off than all provinces. Among provinces, Coast and Central are significantly above the others. North Eastern is far below all other provinces.

3.2.5 Status of Rural Health Unit-HQs

The Rural Health Unit (RHU) concept is very important in the sense that these units will have responsibility for an area containing in average 5-8 health facilities. The RHU - HQ is supposed to have the status of a RHC (at least).

The following table shows the status of the RHU HQs in a survey completed in 1978.

Table 3.7: Status of Rural Health Unit - HQs

Type of Facility	Number	%
Health Centres	112	44
Demonstration Centres	28	11
Rural Health Training Centres	6	2
Dispensaries	43	17
Sub-Health Centres	8	3
Hospitals	57	23
TOTAL	254	100

Source: Rural Health Management - the Kenyan
(Dr M Mlague and L.K. Ndungu)

Comments: 20 % of the RHU - HQ are Sub-Health Centres or Dispensaries, i.e. do not have status and facilities as intended.

3.3 THE HEALTH INFORMATION SYSTEM (HIS)

The information on health facilities is incomplete in many respects. The most significant deficiencies are the following:

- a) Need for updating of the inventory and the records of all health facilities.
- b) Need for a new survey on Rural Health Centre coverage by districts and provinces based on a) and the 1979 Population Census (or 1983 Population Survey).

- c) Need for a new inventory of work-load population and need for up-grading and repair in governmental Rural Health Facilities.
- d) Need for information on RHC bed capacity and utilization by district and provinces.

4 CURATIVE SERVICES (OUT-PUT)

4.1 IN-PATIENTS; ADMISSION

No statistics on admissions, etc have been compiled and are available later than 1979/80.

4.2 OUTPATIENTS; ATTENDANCES (ALL GOVERNMENTAL INSTITUTIONS)

The following table has been compiled from data for the three first quarters of 1984 from the computerized Health Information System. Extrapolations have been made for the fourth quarter of 1984. Extrapolations have also been made for those stations not reporting. Response rate in provinces varies from approximately 50 % to 75 %.

Table 4.1: Total Outpatient Attendances per Person 1984 by Provinces

PROVINCE	As reported (all 1984)	As extrapolated (for 1984)
Central	2.7	3.3
Coast	3.3	4.4
Eastern	2.0	2.7
North Eastern	0.5	0.9
Nyanza	1.3	2.3
Rift Valley	1.3	2.3
Western	1.6	2.3
All Provinces	1.8	2.7

Source: The Health Information System

Comments: The figures as reported are an underestimation. On the other hand, figures as extrapolated might be an overestimation since it is probably most of the larger institutions which have reported. The two figures should therefore be considered as a possible range.

As an average for all provinces, the number of outpatient attendances seems to be something like 2 or 2.5. The largest number attendances per person are in Coast with a figure at approximately 4. Also Central is well above average with the approximate figure of 3. North Eastern has the extremely low figure of less than one.

These figures should not be interpreted as an indicator of morbidity, but as utilization of services.

The average figure for Kenya as a whole (except Nairobi) is quite high. In addition to these attendances there are a number of attendances in Mission and private outpatient departments.

4.3 IMPROVEMENT OF THE HEALTH INFORMATION SYSTEM

In order to estimate the need for expansion of health services, it is necessary to obtain appropriate information on the utilization of existing services. Main weaknesses in the existing HIS are:

- a) No up-to-date information on in-patient admissions, length of stay and occupancy rates. There is, however, a general belief that many hospitals are crowded and most health centre wards underutilized.
- b) Coverage on reporting on outpatient attendances (response rate) is too low (approximately 50-75 %).

5 DEVELOPMENT EXPENDITURES AND PLANNING

5.1 GOVERNMENTAL EXPENDITURES

During the period of 1977/78 up to 1981/82 (5 years) the following actual development expenditures were incurred.

Table 5.1: Total actual Development Expenditures (K£) 1977/78 - 1981/82
by sub-votes

SUB-VOTES	Total actual Expenditure	%
General Administration	59,386	0.1
Curative Health		
Kenyatta Nat. Hospital	10,101,552	20.4
Provincial Hospitals	11,819,081	23.8
District Hospitals	13,191,977	26.6
Psychiatric Services	235,926	0.5
Non-Governm. Org.	738,375	1.5
Subtotal Curative Health	36,086,911	72.8
Preventive medicine	2,203,903	4.4
Rural Health Services	7,657,503	15.4
Health Training	3,309,578	6.7
Medical Research	87,596	0.2
Medical Supply Services	186,304	0.4
TOTAL	49,591,181	100.0

Source: Auditor General reports 1977/78 - 1981/82, Government of Kenya.

Comments: Most of the development expenditures (73 %) have been used for Curative Health, i.e. expanding hospital services. Approximately 20 % has been spent on Rural Health Services + Preventive medicine.

5.2 TRENDS

When studying the trends over the five year period the following pattern for the main sub-votes becomes clear:

Table 5:2 Proportions spent on Curative Health respectively Rural Health Services + Preventive Medicine for each financial year 1977/78 - 1981/82

SUB-VOTES	1977/78	1978/79	1979/80	1980/81	1981/82
Curative Health	64.0 %	67.8 %	73.5 %	75.0 %	78.8 %
Rural Health Services + Preventive Medicine	21.3 %	13.3 %	19.9 %	22.5 %	20.4 %
Health Training	13.9 %	16.8 %	6.0 %	1.3 %	1.3 %

Source: Auditor General reports 1977/78 - 1981/82, Government of Kenya.

Comments: The proportion spent on Curative Health (hospitals) has increased over the years up to almost 80 % in 1981/82. On the other hand expenditures on health training has decreased dramatically from 13.9 % to a little more than 1 %. Expenditures on Rural Health Services + Preventive Medicine have mostly been around 20 %.

There is however a little general uncertainty about the accounting of donor funded projects, which may slightly change the picture.

5.3 EXTERNAL FINANCING; TRENDS

It is difficult to conclude from the accounts of actual governmental expenditures, how much have been financed by donors. According to the plan of implementation of the Integrated Rural Health/Family Planning-project, 18 % of the development budget for the fiscal year (FY) 1980/81 was financed by external assistance; out of which 96,7 % was earmarked for Rural Health Facilities.

The donor component in expenditures for Rural Health + Preventive Medicine has been especially analyzed (source: A in A as a Management Problem: C-G Eriksson).

The following order of precedence and amounts (budgeted expenditures) were observed:

Table 5.3

FISCAL YEAR	Donor Agency	Amount K£
FY 82/83	SIDA	483,350
	USAID	300,000
	NORAD	203,000
FY 83/84	SIDA	665,640
	DANIDA	450,000
	UK	389,000
	NORAD	144,000
	UNICEF	15,000
FY 84/85	DANIDA	1,319,380
	SIDA	1,130,150
	NORAD	309,540
	Netherlands	266,050
	UK	219,070
	FINNIDA	118,040
	Austria	100,000
	EEC	95,020
	GTZ	75,010
	UNICEF	60,010

5.4 DEVELOPMENT PLAN 1984-88 (ESTIMATES)

The following table is the budget expression of the 1984-88 Development Plan.

Table 5.4: Estimates of Development Expenditure

(KE 000)

	1983/84 (Revised) Tentative	1984/85	1985/86	1986/87	1987/88	Total	Share (per cent)
Administration and Planning	81.0	61.0				142.0	0.2
Preventive/Promotive Services							
Communicable and Vector Borne Disease Control	704.5	782.8	797.5	797.0	300.0	3,423.6	
Environmental Health	80.0	181.0	184.0	189.0	833.0	833.0	
Total	784.5	963.8	1,022.8	986.5	499.6	4,256.6	5.9
Rural Health Services							
Rural Health Centres and Dispensaries	5,554.0	6,642.1	5,451.9	4,412.5	7,427.3	29,487.8	41.0
Non-Governmental Organizations (IRP)	586.0					586.0	0.8
Curative Services							
Kenyatta National Hospital	175.0	3.0	303.0	503.0	803.0	1,787.0	
Provincial Hospitals	1,890.0	1,146.0	1,334.3	2,011.0	1,121.0	7,492.3	
District Hospitals	3,644.5	2,523.1	3,013.0	3,233.0	3,008.0	15,421.6	
Psychiatric Services	105.0	50.0	4,400.0	800.0	1,100.0	2,455.0	
Church Hospitals (NGOs)	250.0	250.0	250.0	250.0	250.0	1,250.0	
Total	6,064.5	3,972.1	5,290.3	6,797.0	6,282.0	28,405.9	39.6
Training							
Rural Health Demonstration Centres	180.0	410.0	420.0	170.0	150.0	1,330.0	
National Institute of Health	-	-	-	500.0	150.0	200.0	
Rural Maintenance and Training Schools	355.0	520.0	1,100.0	1,122.0	-	3,097.0	
Community Nurses Training School	190.0	65.0	50.0	550.0	325.0	1,180.0	
Total	725.0	995.0	1,570.0	1,892.0	625.0	5,807.0	8.2
Equipment and Supplies							
Central Medical Stores	-	400.0	800.0	900.0	682.7	2,782.7	
Provincial Medical Stores	-	120.0	120.0	30.0	-	270.0	
Total	-	520.0	920.0	930.0	682.7	3,052.7	4.3
Total Expenditure	13,795.0	13,154.0	14,255.0	15,018.0	15,516.0	71,738.0	100.0

Comments: 47 % of the total estimates for 1983/84 - 1987/88 has been budgeted for Rural Health Services + Preventive Services. This is a substantial increase compared to actual expenditures on these sub-votes 1977/78 - 1982/83 (approximately 20 %). However, budget estimates are not the same as actual expenditures.

It has also been observed that the proportion of the external aid components, paid as Appropriation-in-Aid, i.e. beside the Treasury, has increased rapidly. The trend in Development Estimates for Rural Health Services gives the following picture:

Table 5:5: Development Estimates, Ministry of Health, Sub-Vote 113 Rural Health Services for the FY 82/83, 83/84 and 84/85. (K£)

Estimates	1982/83	1983/84	1984/85
Gross Expenditure	4,020,540	6,301,070	8,669,410
A-in-A	699,000	1,663,650	3,490,270
Net Expenditure	3,321,540	4,637,420	5,179,140

Source: A-in-A as a Management Problem

The estimated amount 1984/85 for A-in-A on Rural Health Services represents 27 % of Total Gross Development Expenditures.

Comments: There has been an increase both in number of donor agencies involved and the total external-aid component. This trend together with the creation of the separate cash-flow system in A-in-A constitutes severe management and co-ordination problems.

5.5 PHYSICAL PLANNING AND IMPLEMENTATION

- some conclusions

Several problem areas are relevant to this issue:

a) Strategy problem

On the in-patient side it is obvious that Kenya with the present rate of population growth, will have great difficulties in keeping the present average standard of 1.5 hospital beds per 1 000 person. That would mean a necessary increase of 22 % in hospital

beds in five years time. On the other hand there is probably at present a substantial potential in underutilized beds at RHCs. However, an increase in utilization is dependent on people's trust in the facilities. This implies a substantial increase in starting, supplying and backing-up of Rural Health Facilities.

b) Information problems

As pointed out earlier there is a lack of information on existing facilities and utilization of these facilities. There is also very little knowledge on population migration.

c) NGOs

Planning in the Government sector should not be carried out in isolation. There is a need to take NGO facilities into consideration.

d) Decentralization and Community Participation

The planning procedures have to gradually adjust to the District Focus implementation.

Self-help projects (Harambee) seem to be a very strong force in Kenya. However, there seems to be a risk that these forces are more developed in well-off areas and thereby causing maldistribution of resources.

e) MoH-HQ-Organization

The organization and physical planning problems in MoH-HQ have been described in Coopers and Lybrands study: Organization, Management and Transport Study in the following way:

"In our review of the present arrangements for the physical planning and implementation of projects, as discussed in our steering committee paper of August 1982, we found the main weaknesses to be:-

- (a) a poor organisation framework. This is reflected in:-
 - (i) the visible overlap in the planning functions of the Senior Deputy Director of Medical Services (SDDMS) and the Deputy Secretary (Planning and Development); and

- (ii) the existence in the Ministry of several small but independent projects implementation units without formal links and defined relationships;
- (b) insufficient staff with training and experience on project planning and implementation who are involved on a continuous and full time basis. Thus, although a Planning and Development Division exists at headquarters this contains a minimum number of positions - and a number of these, for example that of the Principal Economist, have remained vacant for long periods of time. Similarly, the projects implementation units, such as the Rural Health Planning and Implementation Unit (RHPIU), have had to place much reliance in the past on expatriates hired on two or three year contracts for specific projects;
- (c) the absence of clearly defined procedures for undertaking and co-ordinating the diverse activities and tasks involved in physical planning and implementation.

These weaknesses in the present arrangements have resulted in:-

- (a) delays and difficulties in projects planning and implementation. Examples of these have included:-
 - delays in preparation of projects submission sheets;
 - failure to brief adequately the Ministry of Works and Housing (MOWH) on details and standards for project designs;
 - delays in the review and approval of designs;
- (b) reliance on informality, lack of co-ordination in the activities and functions, and consequent reduction in the overall organisational capacity for project implementation."

6 RECURRENT EXPENDITURES; BUDGETING

6.1 TOTAL RECURRENT EXPENDITURES; TRENDS

In the following table total actual recurrent expenditures (MoH) in 1982/83 are compared to 1977/78. Proportions spent on Ministry of Health and Ministry of Education out of the Total Government Recurrent Expenditures are also shown.

Table 6.1: Total Actual Recurrent Expenditures 1977/78 and 1982/83 (K£)

ITEM	1977/78		1982/83	
	K£	%	K£	%
General Administration	1,467,559	5.0	3,983,678	6.5
Curative Health				
Kenya Nat. Hospital	(4,286,730)	(14.7)	(7,917,641)	(12.9)
Provincial Hospitals	(5,108,549)	(17.5)	(11,033,874)	(18.0)
District Hospitals	(9,212,122)	(31.5)	(21,626,010)	(35.3)
Psychiatric Services	(748,718)	(2.6)	(1,683,266)	(2.7)
Non-Governm. Organizations	(851,500)	(2.9)	(1,984,285)	(3.2)
Nat. Spinal Injury Hosp.	-	-	(144,827)	(0.2)
Subtotal	20,207,619	69.2	44,389,903	72.4
Preventive Medicine	2,015,429	6.9	2,821,150	4.6
Rural Health Services	2,147,448	7.4	5,663,080	9.2
Health Training	1,859,403	6.3	3,645,850	5.9
National Health Insurance	153,200	0.5	383,607	0.6
Medical Supplies Services	958,292	3.3	419,055	0.7
Medical Research	392,845	1.4	-	-
TOTAL	29,201,795	100.0	61,306,323	100.0
=====	=====	=====	=====	=====
Total Gov. Recurrent Expend.	336,209,402	-	651,774,289	-
Percentage spent on Ministry of Health	8.7 %		9.3 %	
Percentage spent on Ministry of Education	25.6 %		27.0 %	

Source: Audited Accounts - Auditors Report, GOK

Comments: The proportion spent on Curative Health has increased over the five year period from 69.2 % to 72.4 %, which is quite a high figure. Expenditures on Rural Health Services + Preventive Medicine have decreased slightly from 14.3 % to 13.8 %.

On the sub-vote Curative Health, most of the money is consumed by the District Hospitals; 35 % of the total recurrent expenditures.

6.2 NATIONAL HOSPITAL INSURANCE FUND (NHIF)

Also expenditures within the National Hospital Insurance Scheme Fund have to be taken into consideration when trying to estimate recurrent expenditures on health.

In 1984 it was estimated (source: Health Insurance - Progress and Problems in Kenya) that approximately 160,000 members claim for benefit every year. This represents an average benefit of KShs 375 per year and claimant (as opposed to the average contribution of KShs 240 per year and active contributor).

The total annual claims thereby amount to 600 million KShs (= 30 million K£) which is half of the Ministry of Health budget.

However, total revenue for hospitals in the Insurance scheme is much higher, since the claims only represents a limited amount of expenditures.

Even if the private hospitals are supposed to be non-profit, making revenues from NHIF, result in the accumulation of private equity on the part of the owners (source: Health Strategy In Kenya). Hereby the private medical sector is encouraged to grow.

It should also be noted that the NHIF basically includes urban dwellers (with the necessary salary and reasonable access). Since there are 500,000 contributors in the scheme and most of them represent a household of an average of 6 people it can be concluded that the absolute majority of urban dwellers are within the scheme ($6 \times 500,000 = 3$ million; 15 % of total population = approximately 2.8 million).

6.3 DISTRIBUTION OF EXPENDITURES

The following table shows the distribution of expenditures in each province, first as a total, then as expenditures per person.

Table 6.2: Actual Recurrent Expenditures (KShs 000) 1983/84 in each Province

PROVINCE	Total Actual Exp. (KShs 000)	Population 1983 (projected)	Exp. per person (KShs)
Central	194,269	2,816,341	69.0
Coast	107,287	1,622,060	66.1
Eastern	121,172	3,288,838	36.8
North Eastern	32,174	462,787	69.5
Nyanza	112,883	3,389,861	33.3
Rift Valley	151,497	3,959,249	38.3
Western	77,171	2,187,543	35.3
TOTAL	796,453	17,726,679	44.9

Source: Actual Expenditures 1983/84 (data list)

Comments: The distribution of expenditures per person is very uneven. Central, Coast and North Eastern are double that of all other provinces. Regarding North Eastern the explanation could be the extremely low population density, which makes health services very costly on a per capita basis.

In five selected districts, Muranga, Kilifi, Kitui, Marsabit and Siaya, representing different ecological zones, the average expenditures per person (including District Hospitals and Rural Health Facilities) was calculated at 35 KShs per year.

The per capita amount (based on the total population in the districts) for Rural Health Facilities was however only 5 KShs as an average; varying from 3.5 KShs (Siaya) to 6.9 KShs (Muranga).

This is very much in contrast to the urban population, which has easy access to Government hospitals representing an average expenditure of approximately 330 KShs per urban dweller. In addition to this the urban population has easy access to a large private health sector.

6.4 COSTING OF DIFFERENT TYPES OF INSTITUTIONS

A costing exercise has been carried out. Concerning district level facilities, the sample of districts earlier mentioned, was used. The following figures have been compiled.

Table 6.3

TYPE OF INSTITUTION	Annual Recurrent Expenditures FY 1983/84
Kenyatta Nat. Hospital	158 million KShs (FY 82/83)
Provincial Hospital (average)	30 million KShs
District Hospital (sample average)	12 million KShs
District Sub-Hospital (sample average)	3 million KShs
Rural Health Centre (Sample average)	270,000 KShs
Dispensaries*) (assumption)	54,000 KShs

*) NOTE: It has been assumed that a dispensary, as an average, represents 20 % of expenditures for an average RHC. The assumption can be seen as an extrapolation of the existing staffing pattern in a number of sample health facilities (referring to the item staffing and manpower planning).

Comments: Recurrent costs for Rural Health facilities are very small in comparison with hospitals. The recurrent expenditures for a district hospital are more than 40 times higher compared to a RHC as an average and more than 200 times higher than a dispensary.

6.5 HEALTH PERSONNEL EXPENDITURES

The proportion of total recurrent expenditures in Ministry of Health, spent on Labour cost was approximately 50 % in 1980/81 (source: Statistical Abstract 1983). However there is a variation between different types of institutions. The following pattern was observed in the costing exercise previously referred to in section 6.4:

Table 6.4

TYPE OF INSTITUTION	Proportion spent on personnel
Kenyatta Nat. Hospital	45 %
Provincial Hospital	58 %
District Hospital	58 %
Sub-District Hospital	43 %
Rural Health Centres and dispensaries	30 %

Source: Actual Expenditures 1983/84 (datalist)

Comments: These figures reflect the general pattern of staffing and perhaps also to a certain extent difficulties in posting health personnel to rural areas.

6.6 EXPENDITURES ON MEDICAL SUPPLY (DRUGS), SERA AND VACCINES

The total expenditures on this sub-vote amounted to 247.5 million KShs in 1982/83. 73 % was spent in hospitals and 21 % on Rural Health Services + Preventive Services. The total expenditures allocated to Rural Health Services amounted to approximately 48 million KShs.

6.7 FINANCIAL MANAGEMENT; DISTRICT FOCUS

a) Financial Management

This issue has been studied in the Coopers and Lybrand Study (Organisation, Management and Transport Study). Main findings were:

"Briefly, the main weaknesses in financial management and control at the MoH are:-

- (a) poor organisation within the function. This is reflected in:-
 - (i) the illogical splitting of certain related roles between different sections (for example preparation of budgets and forward estimates for recurrent and for development expenditure are handled by totally distinct sections within the MoH); and

- (ii) the imprecision of the existing job descriptions in relation to certain key responsibilities (for example, project prioritisation and ranking) and lines of reporting.
- (b) inadequate, unqualified and inexperienced staffing. For example, the numbers of staff under the PFEO number only four, and their background and orientation are more concerned with administrative duties than financial management;
- (c) the absence of a budgetary process and discipline within the ministry. This is clearly indicated, for example, by the failure to produce budgets on a timely basis, and by failure of many AIE holders to utilise the budget as tool of planning and control;
- (d) the absence of a reliable data base to support financial planning; and
- (e) the absence of an effective system of management information.

Amongst the severe consequences of these weaknesses in the arrangements for financial management and control are:-

- (a) ineffective budgeting arrangements which result in breach of standing government financial regulations and consequential poor and discordant relations with the Treasury;
- (b) unauthorised excess votes, on the one hand and on the other a failure to effectively and efficiently utilise available funds for their intended purposes;
- (c) poor coordination between the management of recurrent and development expenditure, which results in delays in commissioning and operating newly completed projects;
- (d) the absence of formal priorities in selecting development projects with the inevitable results of inefficient and inequitable distribution of resources; and
- (e) a poor basis for the allocation of annual recurrent estimates, and resultant delays in issue of funds to AIE holders, with consequential impact on the health care in the relevant areas."

b) District Focus

The problem of developing and integrating the District Focus concept into the Government Administration is described in the

1984-88 Development Plan in the following way:

"The District Focus Strategy became officially operational on 1st July, 1983. Since then the ministries and the districts have been working to ensure that the new strategy becomes effective quickly. Realizing the full potential of the District Focus Strategy, however, will be a long-term process. The redeployment of technical staff from the centre and the provinces to the districts has begun, but it cannot be completed overnight. Office space and housing must be found in the districts for the redeployed staff. In most cases, transferred staff members must be given training to prepare them for their new assignments. The new administrative procedures associated with implementing the strategy must be introduced in a manner that minimizes disruption. Finally, the long lead times required for project identification, design, review, approval, funding, and implementation are such that much of the development taking place during the first 18 months after introduction of the District Focus Strategy will reflect decisions and commitments made prior to 1st July, 1983.

Ministry Tasks - For Financial Year 1983/84 the ministries are being asked to disaggregate the rural development aspects of their budgets on a district-to-district basis indicating how much money is to be spent on each project in each district. This will enable the districts to know what projects are planned, and to prepare the Work Programmes accordingly.

Early in the process of budget preparation for Financial Year 1984/85, each ministry with rural development activities will inform the Ministry of Finance and Planning and the districts of the funds allocated to each district. Each ministry will also issue a set of guidelines indicating the general types of projects to be financed. These guidelines will be based on district priorities and national policy. Each ministry will receive from each district a list of proposed projects that can be accommodated within the funding ceiling and the guidelines. The individual projects will then be identified in the ministry budget thus ensuring that they can be funded when the budget is approved.

District Tasks - While the ministries are redeploying staff and establishing new procedures, the districts will organize themselves to assume their new responsibilities under the District Focus Strategy. The annual cycle of Divisional and District Development Committee meetings to identify projects and establish development priorities will be regularized. The DDC Executive Committee must assume responsibility for submitting project proposals to the appropriate ministries.

The effectiveness of the district-based rural development strategy depends to a large degree on the capability of the staff involved. Training will be provided to personnel at all levels to assist them in developing the necessary skills. It is expected that some 3,500 people are going to be involved during the early years of the 1984-88 Plan Period.

General Administration - Training on general principles of administration will be offered to those officers having co-ordination roles. Participants will include provincial commissioners, district commissioners, and district heads of ministries. The emphasis will be on the practical aspects of administrative matters essential in carrying out day-to-day management responsibilities. The training will be done through short in-service and on-the-job seminars and workshops.

Project Planning - Project planning will require special training for both administrators and ministry representatives. Provincial Planning Officers and District Development Officers will receive the most extensive training; their effectiveness is critical to the organization and management of development work in the districts.

Budgeting Procedures and Techniques - The ministries will work closely with the districts in the preparation of annual budgets and forward estimates.- Training will be provided to those involved in this process at both ministry and district levels. New budgetary procedures are being developed to make the District Focus Strategy operational, and these will be the main subject of the training programme.

Financial Management - The impact of the new budgetary procedures will depend to a large extent on the effectiveness of financial management. With a strengthened District Treasury and an expanded role for the District Tender Board, the level of financial responsibility in the districts will be considerably greater than it has been in the past. Training will be arranged for those in the ministries issuing AIEs and the staff in the field who receive and service them."

7 STAFFING AND MANPOWER PLANNING AND IMPLEMENTATION

7.1 GENERAL DEVELOPMENT SINCE INDEPENDENCE

The number of health workers in Government Health Services has been increased considerably; from 6,300 at Independence up to more than 30,700 in 1982. During the same period the number of fully qualified doctors in Government Services increased from 339 to 787 (source: Development Plan 1984-88).

7.2 NUMBER OF HEALTH WORKERS FOR SELECTED CATEGORIES; DISTRIBUTION ON OWNERSHIP

By combining data from different sources it is possible to calculate the distribution of health personnel on ownership (Government, Mission and private). The following picture emerges.

Table 7.1: Distribution of Number of Health Personnel by Ownership for Selected Categories, 1982.

CATEGORY	Ownership			Total number registered
	Government	Private	Mission	
Doctors	835	1,213	103	2,151
Dentists	79			239
Registered Nurses	2,347			7,675
Enrolled Nurses	7,696	7,867	884	9,665
Clinical Officers	1,251			1,821
Public Health Officers	374			
Public Health Technicians	1,420			
Pharmacists	86			186
Pharmaceutical Technologists	304			359
Laboratory Technicians	525			
Laboratory Technologists	282			

Sources: MoH Development Plan 1984-88
Economic Survey
Coopers and Lybrand Study

Comments: Data given from the different sources does not totally correspond. The figures which have been calculated for the private sector may therefore be slightly wrong. However the tendency is quite clear: A substantial proportion of the qualified health workers are employed in the private sector; more than 50 % of all doctors; more than 40 % of the total of nurses + clinical officers. Obviously this fact has to be taken into consideration in manpower planning and training.

7.3 STAFFING NORMS FOR RURAL HEALTH FACILITIES

The staffing norms for Rural Health Facilities are as follows:

Table 7.2: Staffing Norms of RHF's

STAFF CATEGORY	RHC ¹	D ¹	D ²
Clinical Officer	1	-	-
Enrolled Community Nurse	5	2	3
Public Health Officer	1	-	-
Public Health Technician	1	1	1
Family Health Field Educator	2	-	-
Laboratory Technician	1	-	-
Statistical Clerk	1	-	-
Patient Attendant	3	1	2
General Attendant	5	1	3
Driver	1	-	-
Cook	1	-	-
Watchman	2	-	-
TOTAL	24	5	9

Source: MoH

- 1) Current norms, as revised in 1980. Previously dispensaries type 1 had a norm of one ECN and RHCs four ECNs. No Public Health Officers were previously included in the RHC staffing norms.
- 2) Planned. For dispensaries type 11 serving populations in the upper range of the 8,000 to 16,000 bracket the norm of three ECNs is likely to prove too low.

Comments: The staffing norm for Clinical Officers is relatively poor. One Clinical Officer is supposed to serve in average a population of 70,000 people. (The Zambian equivalent, the Medical Assistant is supposed to serve a population of 5,000 - 10,000 people).

7.4 ACTUAL STAFFING IN RURAL HEALTH FACILITIES

An inventory of staff in a number of districts in Central, North Eastern, Western and Rift Valley Provinces has been carried out in 1981 and 1983 as a part of the follow-up in the Integrated Rural Health and Family Planning program. The following was the out-come:

Table 7.3: Target achievements in staffing for selected districts

PROVINCE		Target achievements (%) for different categories of health workers											Target achievement (%) in RHF					
												Total number of staff staff	HC		Sub-HC		Disp	
		CO	PHO	PHT	ECNa	FHFE	LT	SC	D	SS ¹	All		N:o	%	N:o	%	N:o	%
Central	-81	60	28	73	89	215	10	76	62	77	79	1,040	29	80	6	98	111	77
	-83	104	24	72	105	187	8	74	50	75	86	1,395	38	90	7	101	128	78
North Eastern	-81	100	0	82	38	75	0	0	67	37	43	85	6	35	-	-	11	62
	-83	100	14	88	54	64	0	0	57	57	57	128	8	42	-	-	17	67
Western	-81	90	22	84	120	137	4	85	56	66	94	643	27	77	4	138	15	117
	-83	79	6	95	136	107	12	118	47	52	76	704	34	65	4	143	17	141
10 Distr of Rift Valley	-81	96	48	50	63	102	24	33	67	63	62	592	21	68	7	69	76	54
	-83	91	32	60	76	71	12	53	47	42	55	795	34	58	9	69	107	48

1) SS = Subordinate Staff

Comments: Target achievements have improved between 1981-83 in Central and North Eastern but worsened in Western and Rift Valley.

Target achievements vary a lot between provinces. Central is in a much better position than the other provinces. Rift Valley has the lowest target achievement.

There is also a large variation between different staff categories. Laboratory technicians and Public Health Officers have very low figures on target achievement.

A study of the pattern of staffing in Health Centres and Dispensaries has been carried out during this evaluation. The average number of staff in a Health Centre was calculated to 16.2; the corresponding figure for Dispensaries was 3.5. As in the inventory previously mentioned, there was a substantial variation between districts.

Possible explanations to the variation between districts is that qualified staff categories shun less popular districts and prefer the private sector.

7.5 ACTUAL STAFFING IN DISTRICT HOSPITALS

The actual staffing situation in two selected District Hospitals has been compiled. The following staffing position was observed.

Table 7.4: Number of Health Workers in Two Selected District Hospitals

CATEGORY	Meru Hospital	Nyamira Sub-District Hosp.
Medical Officers	8	3
Hospital Secretary	1	-
Clinical Officers	16	13
Registered Nurses	25	12
Enrolled Nurses	175	55
X-ray	6	4
Laboratory	11	4
Physiotherapy	5	4
Public Health Off/Tech	-	2
Fam Health Field Educ	-	3
Clerks	21	18
Subordinated staff	47	89
TOTAL	315	207
Number of beds	346	145
Total staff per 100 beds	91	143
Number of nurses per 100 beds	58	46
Number of MO per 100 beds	2	2

Source: Reports from Hospitals

Comments: The number of staff in the two hospitals are comparatively high. There are 0.9 and 1.4 number of staff per bed respectively.

7.6 MANPOWER PLANNING

There is no regular and covering reporting from districts and provinces on staff positions in different health institutions. Information in MoH on staff in NGOs is poor. Thus the basis for a proper manpower planning is not there at the moment. Moreover, certain staffing norms, e.g. for District Hospitals, should be reviewed.

In the Coopers and Lybrand study the manpower planning problems have been summarized as follows:

"Although we are of the view, as a result of our discussions with MoH staff, that there are serious shortfalls among professional

personnel and medical auxiliaries, the high level of shortfall among unskilled personnel provokes a number of considerations, as there are no obvious reasons why these positions should remain unfilled:-

- (a) the approved establishment for some jobs may be overstated and no additional staff are genuinely needed;
- (b) shortfalls in some job groups may be offset by surpluses in others;
- (c) an absence of turnover statistics may create difficulties in assessing the rate at which recruitment of staff should occur and thus creating, in job categories with a high turnover, a permanent shortage of staff;
- (d) training facilities may be inadequate to provide the right numbers of staff in some job groups, commensurate with the growth in the health care delivery services.

In our view staff shortages are partly attributable to weakness in the manpower planning and training procedures currently utilised by the Ministry of Health. In our recommendations for the reorganisation of the personnel function in the Ministry of Health, we have made provision for the strengthening of manpower planning and training planning activities. We consider that the manpower requirements of the Ministry of Health can only be accurately stated when sound procedures have been introduced in such areas as manpower planning, training planning, personnel statistics, staff appraisal, career planning and establishment control."

8 *TRANSPORT PROBLEMS*

8.1 *THE COOPERS AND LYBRAND STUDY*

In this study, undertaken in 1982, the transport problems in the Ministry of Health were discussed. According to this study and the sampling method used it was estimated that the total size of the vehicle fleet available for use at that time was between 500 and 550 vehicles, representing an estimated 44 % of the total vehicle establishment. Among the other vehicles, not functioning, it was estimated that only 50 % could be repaired economically.

The consequences of this situation are described in the study in the following way:

"Unfortunately the supply of transport services has not managed to keep pace with the demand. In particular we have found that at the District level:-

- (a) the senior District officers are unable to supervise adequately the work of their staff throughout the District because of inadequate transport;
- (b) the provision of mobile clinics has been suspended in most areas because of a shortage of funds to purchase fuel, and because vehicles originally intended for these purposes are often reassigned to other services within the Ministry;
- (c) the staff at many rural health centres are effectively isolated because of lack of transport and no, or poor, telephone communications;
- (d) no transport is usually available to enable the team at Rural Health Centres to move out to visit other areas and dispensaries within the Rural Health Units;
- (e) drugs are at times not delivered to Rural Health Centres and dispensaries;
- (f) public health technicians have difficulty in carrying out their duties because they cannot obtain transport.

At the Provincial level many of the senior specialist staff are not able to spend as much time as they should supervising the activities of the more junior staff because of inadequate transport. Visits by provincial specialists to District Hospitals are often cancelled because of lack of transport."

When explaining this situation, Coopers and Lybrand referred to the following reasons/areas

- lack of appropriate forward planning and budgeting (e.g. overspending on vehicles but inadequate estimates for fuel)
- insufficient control and co-ordination of the transport fleet
- insufficient funds available for transport (vehicles)
- inappropriate use of vehicles
- inadequate vehicle maintenance

- non-feasible procedures for the purchase of fuel
- deficiencies in driver recruitment, training, incentives and discipline
- deficiencies in recording and analysis of vehicle usage
- lack of proper organizational structure.

8.2 OTHER COMMENTS

The situation described in the Coopers and Lybrand study is not completely unique for Kenya. On the contrary this situation is common in several developing countries in Africa, e.g. in Zambia.

What, however, has not been analyzed in the Coopers and Lybrand study is, what other means of transport would be feasible to use as alternatives. Public transport is rather easily available in many parts of Kenya. Motorcycles and bicycles could also be used as means of transport in Rural Health Facilities. This kind of study should certainly be carried out at some stage.

9 MAINTENANCE (EXCEPT VEHICLES)

9.1 INTEGRATED RURAL HEALTH/FAMILY PLANNING PROJECT; PLAN OF IMPLEMENTATION

In this document, the existing situation is described as follows:

"Although the Ministry of Works (MOW) is responsible for the maintenance of RHF buildings, the actual work is done by private contractors. For this purpose the budget of the MOW contains a yearly allocation equivalent to 2.5 % of the estimated replacement value of all registered RHF's. This arrangement works reasonably well. However, unregistered facilities (mainly those constructed by self-help "harambee" groups) are not maintained by the MOW. The MoH is allocated KShs 50,000 per year per district for minor repairs to unregistered facilities, which is insufficient.

The maintenance of equipment in RHF's is also inadequate. It is common to find facilities without water or electricity because pumps and generators have broken down and there is no one to repair them. The same is

true of refrigerators, office machines, surgical instruments, and laboratory equipment. Equipment is often found which has never been used because of original defects or because no one has been instructed in its use. Although there is a large maintenance and repair workshop at Kenyatta National Hospital, it is obviously impractical to use it for repairs of RHF equipment. Several district and provincial hospitals also have small workshops that handle some of the repairs for RHFs, but more maintenance capacity needs to be developed."

In the plan of implementation the following maintenance projects are included:

"The maintenance programme of unregistered rural health facilities will be improved and two maintenance training schools will be established modelled after the pilot project at Loitokitok District Hospital. The location of said schools will be determined, and qualified architects will be employed, by December 31, 1983.

Thirty six (36) maintenance technicians would be trained each year for a full year in maintenance and repair of health facilities and equipment (refrigerators, sterilizer, generator) and, to a lesser extent, vehicles. Upon graduation they would be employed by MoH at the district level, where they would be responsible for maintenance and minor repairs at rural health facilities and the hospital. They would be supervised at least for two years, by the MIS instructors and MoH's maintenance section Nairobi."

9.2 OTHER COMMENTS

Concerning maintenance there is a divergence between MoH and MOW at least in two aspects:

a) Unregistered facilities

There is a little uncertainty about the responsibility for certain facilities. MOW may refuse to take responsibility for facilities which have not been constructed according to their standard and under their supervision; e.g. RHC pilot projects and "donor administrated" (e.g. SIDA-crash programme for RHC). These problems should be resolved.

b) MoH-responsibility: minor repairs

Although maintenance of buildings is the responsibility of MOW, there should be some responsibility and funds for basic maintenance and minor repairs within MoH. Responsible officers should be identified at each level within the MoH.

10 FINDINGS: SUMMARY

10.1 HEALTH FACILITIES AND SERVICES

Since Independence there has been a substantial increase in the number of health institutions, particularly regarding dispensaries. The number of hospital beds and cots has also increased very much.

There are more than 200 hospitals in total in Kenya. However, it should be noted that the definition of hospitals is not very clear. Some NGO hospitals are very small. In an "average" district, there is an average of 5 hospitals and 7 health centres (and 29 dispensaries). Further there is an average of approximately 1.5 hospital beds per 1,000 population. In addition to that, there are also in-patient facilities at the RHCs.

There is some evidence that the distribution of health institutions (outpatient facilities) is rather skew. Some provinces, like North-Eastern in particular but also Eastern, Rift Valley and Coast, have a comparatively poor "average access" to health institutions. In terms of "average workload", North-Eastern and Western are worse off than other provinces.

There is a need to update the surveys undertaken in 1978 and 1981 in order to have a detailed inventory of existing facilities, workload, population etc., in each district. The targets for population coverage and walking/travelling distance (4 miles) should be reviewed and established.

30 % of all health institutions are owned by NGOs; in terms of hospitals even 60 %.

These facts imply that health planning in the government sector should be more integrated with development and planning in the NGO sector.

The National Hospital Insurance Fund (NHIF) makes use of a large proportion of the total health resources in Kenya. Annual claims for benefits amount to some 600 million shillings. In total an estimated 40 - 50 % of all doctors, nurses and clinical officers are employed in the private health sector, many of them within the NHIF.

Basically the NHIF is serving urban dwellers. Moreover, the NHIF is functioning as a vehicle for expansion of the private health sector, implying a drain of health resources (personnel, etc.) from rural to urban areas.

10.2 DEVELOPMENT EXPENDITURES AND PLANNING

During the period 1977/78 - 1981/82 (5 years) most of the development expenditures (73 %) have been used for Curative Health, i.e. expanding hospital services. Approximately 20 % has been spent on Rural Health Services + Preventive Medicine.

The proportion spent on Curative Health (hospitals) has even increased over the years up to almost 80 % in 1981/82. On the other hand expenditures on health training has decreased dramatically from 13.9 % to a little more than 1 %. Expenditures on Rural Health Services + Preventive Medicine have mostly been around 20 %. There is, however, a little general uncertainty about the accounting of donor funded projects, which may slightly change the picture.

However in the Development Plan 1984-88, 47 % of the total estimates for 1983/84 - 1987/88 has been budgeted for Rural Health Services + Preventive Services. This is a substantial increase compared to actual expenditures on these sub-votes 1977/78 - 1982/83 (approximately 20 %). However, budget estimates are not the same as actual expenditures.

There are several problems involved in development and physical planning. These problems are mainly on a strategic level and therefore not very easy to tackle in a simple way. The problems involved include items like:

- health facility strategy (hospital vs RHF),
- donor policy (A-i-A, SIDA-Crash Programmes etc)
- HQ-Organization (see the Coopers and Lybrand study).

In addition to this the decentralization process to districts and the community participation (self help projects) efforts, may constitute additional planning and control problems.

As outlined in the 1984-88 Development Plan there is a need to adapt the MoH-Organization to the District Focus Development. This includes adapting in terms of manpower (redistribution), training and administrative systems and procedures.

In particular, there is a need to adapt the budgeting and accounting procedures. This includes a specification of district budgets and expenditures (development and recurrent).

10.3 RECURRENT EXPENDITURES

Distribution of recurrent expenditures (measured as total expenditures per capita) among provinces is very skewed.

72 % of the total recurrent expenditures are allocated to hospitals.

The amount of expenditures reaching the RHF has been calculated to some KShs 5 per capita and year 1983/84. This is very much in contrast with the urban population, having easy access to all hospitals and a large private health sector.

Therefore there is much evidence that recurrent resources should be more fairly distributed among districts and provinces. A bigger proportion should also be given to Rural Health Facilities.

10.4 STAFFING AND MANPOWER PLANNING

There is a lack of data and accessible records regarding staffing. However, there are some significant data indicating that hospitals are overstaffed and Rural Health Facilities (RHF) understaffed.

Having this situation in mind there is a case for:

- 1) Reviewing the establishment for hospitals and RHF. Additional clinical officers seem to be needed in many RHCs.
- 2) Strengthening of procedures for posting, transferring, recording and reporting of staff.

10.5 TRANSPORT AND MAINTENANCE SITUATION

A study on the problems of transport and vehicle maintenance was carried out by Coopers and Lybrand Associates in 1982. This study certainly calls for some action to be taken. However, this study did not discuss what other means of transport would be feasible to use as alternatives (public transport, bicycles and motor cycles).

The maintenance problem, particularly concerning buildings, has been recognized for a long time. Although the main responsibility for maintenance is with the Ministry of Works, some follow-up and minor repair should take place within MoH.

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The evaluation mission consisted of Dr Carl-Gunnar Eriksson, Mr Johnson Nganga, Mr Samuel Ongayo and Mr Charles Thube from the Kenyan Ministry of Health, Dr Lillemor Andersson-Brolin and Ms Christina Regnell from SIDA and the consultants Mr Ralf Jonsson and Dr John Martin.

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ISBN 91-586-7075-0
ISSN 0283-0736