

Government of Japan
and
United States Agency for International Development

Joint Sector Assessment and Strategy
for
Health, Population and AIDS in Kenya

April 1995

JICA/Kenya

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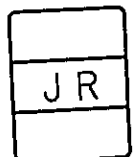
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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
AIE	Authority to Incur Expenditure
ARI	Acute Respiratory Infection
ASAL	Arid and Semi-Arid Lands
AVSC	Association for Voluntary Surgical Contraception
CBD	Community Based Distributors
CBHC	Community Based Health Care
CDC	Center for Disease Control
CDD	Control of Diarrheal Disease
CDR	Crude Death Rate
CHAK	Christian Health Association of Kenya
CMR	Child Mortality Rate
CO	Clinical Officer
DANIDA	Danish International Development Agency
DDC	District Development Committee
DFH	Division of Family Health
DHMB	District Health Management Board
DHMT	District Health Management Team
DHS	Demographic Health Survey (also KDHS)
DMOH	District Medical Officer of Health
DMS	Director of Medical Services
DPM	Directorate of Personnel Management
DSA	Development Solutions for Africa
FLE	Family Life Education
FP	Family Planning
FPAK	Family Planning Association of Kenya
FPLM	Family Planning Logistics Management
GDP	Gross Domestic Product
GOJ	Government of Japan

GOK	Government of Kenya
GTZ	German Technical Co-operation
HCF	Health Care Financing
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HMB	Hospital Management Board
HSI	Human Suffering Index
IEC	Information, Education and Communication
IMR	Infant Mortality Rate
IPPF	International Planned Parenthood Federation
IUCD or IUD	Intra-uterine Contraceptive Device or Intra-uterine Device
JHPIEGO	John Hopkins Programme for International Education in Reproductive Health
JICA	Japan International Cooperation Agency
KCS	Kenya Catholic Secretariat
KDHS	Kenya Demographic Health Survey
KEMRI	Kenya Medical Research Institute
KEPI	Kenya Expanded Programme on Immunization
KHCP	Kenya Health Care Health Project
KIA	Kenya Institute of Administration
KMTC	Kenya Medical Training Centre
MCH	Maternal and Child Health
MCH/FP	Maternal Child Health and Family Planning
MIS	Management Information System
MOH	Ministry of Health
MOHA	Ministry of Home Affairs
MTC	Medical Training Centre
NACP	National AIDS Control Programme
NASCP	National AIDS/STDs Control Programme
NCPD	National Council for Population and Development
NDP	National Drug Policy
NGO	Non-Governmental Organization
NHIF	National Hospital Insurance Fund
ODA	Overseas Development Administration (Britain)

ODA	Overseas Development Assistance (Japan)
ORS	Oral Rehydration Salt or Solution
PHMT	Provincial Health Management Team
PS	Permanent Secretary
PSC	Public Service Commission
RHDC	Rural Health Demonstration Centre
RHTC	Rural Health Training Centre
SDP	Service Delivery Point
SIDA	Swedish International Development Agency
STD	Sexually Transmitted Disease
TBA	Traditional Birth Attendant
TFR	Total Fertility Rate
TOR	Terms of Reference
UNESCO	United Nations Scientific and Cultural Organization
USAID	United States Agency for International Development
USMR	Under-5 Mortality Rate

Executive Summary

The Governments of Japan (GoJ) and the United States of America (USG) have embarked on a program to coordinate development assistance under the U.S.-Japan Common Agenda on Global Perspectives and the Government of Japan's Global Issues Initiative on Population and AIDS (GII). Kenya is one of the countries selected for the implementation of this initiative.

As a result, the Government of Japan and the United States Agency for International Development (USAID) collaborated to produce *The Joint Sector Assessment and Strategy on Health, Population and AIDS in Kenya*. The Joint Sector Assessment (Chapters 2-7) describes and analyzes health status, sector resources and the management capacity of the major service delivery organizations. It outlines the health and development policies of the Kenyan Government, and those of the GoJ and USG (Chapter 8-9).

The proposed Joint Strategy (Chapter 10) outlines a rationale and framework for the implementation of the Common Agenda/GII in Kenya. It suggests an approach that includes collaboration in program planning, and the design of projects that would be independently implemented through the development assistance agencies of the GoJ and the USG. The Joint Strategy takes into account the new health policy of the Government of Kenya (GoK) and includes policy dialogue with government officials as part of the planning and approval process.

While Population and HIV/AIDS are the target areas of intervention of USAID and the GoJ in the population and health sector in Kenya, the proposed projects take an integrated approach which includes family planning, HIV/AIDS/STDs, maternal and child health, reproductive health and girls' and womens' education.

The focus of proposed interventions involve strengthening the capacity of public and private (NGO) institutions to deliver essential primary and preventive services and enhancing long-term sustainability by strengthening health care financing and health sector self-sufficiency.

The strategy outlined in this document should be viewed as the first step in the planning process. Additional discussion between representatives of the respective governments will be necessary to finalize the Joint Strategy.

Historical and Economic Context

On December 12, 1963, Kenya gained independence from British rule. After ten years of single-party rule, in December 1992, Kenya held multi-party elections.

Kenya's 582,000 square kilometers is divided into 8 provinces and sub-divided into 48 districts.

The population consists of 43 distinct ethno-linguistic groups. The major groups include the Kikuyu, Luo, Luhya, Kamba, Kalenjin, Mijikenda, Meru, Embu, and Kisii.

Agriculture accounts for 25 percent of Kenya's gross domestic product (GDP). Other important sectors include manufacturing which represents 13 percent of the GDP and coffee, tea and tourism which are the main sources of foreign exchange.

The country has gone through several economic phases since independence and is currently experiencing a period of declining growth.

Health Status of the Kenyan Population

The health status of Kenyans has significantly improved since Independence. Life expectancy has increased from 44 years to 60 years, the Infant Mortality Rate has been halved, and the Child Mortality Rate reduced by one-third. Most gains were made in the first 10 to 15 years after Independence. Since then, the rate of change has been slow and has leveled off for some basic indicators.

The major causes of morbidity are malaria, acute respiratory infection (ARI) and diarrhea accounting for 54 percent of reported visits to out-patient facilities. A longitudinal analysis shows that the leading causes of morbidity in Kenya have not changed in the past ten years. However, rapid increases in AIDS and HIV related diseases are adding to the burden of disease in Kenya.

The major causes of mortality for children under 5 are malaria, acute respiratory infections, diarrhea and complications of birth and the peri-natal period. Hospital case fatality rates have increased for all major causes of illness except for measles. There are important regional differences in health status which have implications for health policy and investment strategies.

HIV/AIDS

In 1987, the Government of Kenya established the National AIDS Committee. HIV/AIDS issues have been incorporated into the Ministry of Health's "Health Policy Framework."

NGOs and the private sector have joined in the national effort to stem the spread of the epidemic and alleviate the suffering of those with the disease.

Official statistics show that there have been 52,000 cases of AIDS (1987-1994), but the true number is estimated at over 150,000. The adult HIV prevalence rate continues to increase and is estimated to be 5.7 percent (October 1994). HIV prevalence rates vary between districts, and some report that 10 to 20 percent of pregnant women are infected with the virus.

HIV/AIDS in Kenya has placed an enormous and costly burden on the health care system. Between one-third and one half the hospital beds are occupied by persons with HIV/AIDS and related diseases.

Information on the dangers of HIV/AIDS and its transmission through sexual intercourse is well disseminated among the population (over 90%). However, half the population still believes that HIV can be contracted from mosquito bites and less than one quarter of Kenyans identified condoms as a means of protection against HIV/AIDS.

There are approximately 160,000 AIDS orphans and their numbers are expected to increase to about one million by the year 2005. This will tax the limited resources of the extended family.

Population, Family Planning and Reproductive Health

In the 1970's, the Nordic countries and USAID established training facilities and trained Kenyan staff to provide family planning services and information. While acceptance of family planning was initially slow, the increased use of contraceptives during the past decade has produced a one-third decline in fertility (from 8.1 to 5.4). This is one of the most dramatic rates of decline in the world.

The 1993 Kenya Demographic Health Survey reports that 33 percent of married women use a contraceptive method -- 26 percent of them use modern methods. The pill is the most widely used method (10%) and is followed by injectibles (7%), sterilization (6%) and the IUD (4%). There are significant differences in the level of contraceptive use by province.

Although the number of women who did not want more children increased from 45 to 55 percent between 1989 and 1993, the unmet need in 1993 was estimated to be 46 percent, an increase of 9 percent since 1989. Reasons cited for not using contraceptives include: lack of knowledge, lack of access and availability, infrequent sex and husband's disapproval. GoK legislation prohibits unmarried women under 19 from obtaining family planning services.

Health Service Delivery

At Independence in 1963, the Government gave a high priority to the improvement of the health status of Kenyans. In 1965, the GOK introduced free outpatient medical services. Health policy guidelines in several National Development plans emphasized preventive strategies and rural services. The budgets, however, have not changed to reflect this policy, and the Ministry still spends 70 percent of its resources on hospitals.

Health services in Kenya are provided by public and private (mission and other NGOs) institutions. Outpatient utilization surveys in 9 districts found that GOK facilities receive 40 percent of visits, private and mission 20 percent, pharmacies 22 percent and traditional practitioners 5 percent. Compared to the population which primarily uses public services, those who use NGO and private services have higher incomes, higher education, and live in urban areas.

The Public Sector

The following are the leading public health sector agencies in Kenya: the Ministry of Health (MOH); the Municipal Departments of Health; Kenyatta National Hospital, Kenya Medical Research Institute (KEMRI), and other parastatal medical institutions; the National AIDS and STD Control Program (NASCP); and, the National Council for Population and Development (NCPD).

The Ministry of Health (MOH) is responsible for national health policy and is the major provider of health services in Kenya. It has 44,000 employees and manages almost 2,000 health facilities and offices.

The MOH provides a full range of health services in cities and rural communities throughout the country. They include curative care at inpatient and outpatient facilities, MCH, Family Planning services and other programs (KEPI, CDD, Nutrition, Vector Borne Diseases etc.). Most facility based preventive services (including MCH/FP) are organized through the Division of Family Health (DFH). The MOH also has a large Environmental Health program run by Public Health Officers and Technicians. Other GOK agencies provide a more limited range of services.

There are almost 3,700 health and health related facilities in Kenya. The GOK operates 58 percent of them. This includes more than half the hospitals, over three quarters of the health centers and more than 60 percent of the dispensaries. More than half the total beds and cots are found in GOK facilities and the Government employs about 70 percent of all health personnel.

There are approximately 80,000 people directly employed in the health sector. Nearly half the employees in the health sector are in administrative, maintenance and subordinate positions.

Most Kenyan health personnel are educated at the Medical Training College. Major weaknesses in the MTC are the lack of a teaching and administrative staff with adequate academic credentials, the poor condition of the physical facilities, lack of equipment and supplies, outdated curricula (for most cadres) and limited capacity for planning and management.

In response to the need to strengthen pre- and post-service training, the *Health Policy Framework* states that the Ministry will reformulate its National Manpower and Training policies. One objective is to increase staff at dispensaries and health centers. Another is to achieve a more equitable distribution of personnel between urban-rural areas, and among the provinces and districts. Training institutions and curricula will be reformed to ensure that health professionals are able to deal effectively with the curative and preventive aspects of Kenya's major health problems.

There are significant differences in the distribution of facilities, beds and health personnel. The number and distribution of beds have a direct impact on the distribution of health personnel. Large urban, GOK facilities with many beds require a large staff and are usually given priority in staff deployment. This practice has led to a serious deficit of professional staff in the smaller, rural facilities. The lack of adequate personnel in dispensaries and health centers (together with their lack of pharmaceuticals and supplies) contributes to high demand for treatment at hospitals. Analysis shows that the lack of careful physical planning within the GOK is partly responsible for the urban-rural inequities, and that concentration of private sector resources in urban areas also contributes to this imbalance.

The Ministry of Health and most other public agencies are characterized by structural and organizational weaknesses. They include: (i) the lack of effective control over critical resources (e.g., personnel management and finances); (ii) high turnover in senior management positions; (iii) senior staff not adequately qualified to provide leadership and technical guidance; (iv) inadequate and poorly managed information systems and; (v) poorly organized administrative and management systems.

Strengthening the capacity of the public sector to plan, design, implement and evaluate appropriate family planning and health services is critical to meeting the immediate and long-term health and population needs of Kenyans.

The Private Sector/NGOs

Private for-profit health facilities operate under the authority and direction of individual owners and/or boards of directors. They include private physicians, clinical officers, nurses, pharmacists and traditional healers. They are involved primarily in curative care for inpatients and outpatients, family planning and the sale of drugs.

The private sector operates almost one quarter of the facilities, including 17 percent of the hospitals and almost 90 percent of the nursing and maternity homes. They have about one

quarter of the beds and 16 percent of the health sector employees. Facilities and personnel in the private sector are concentrated in urban areas. Pharmacists, traditional health practitioners and small shops that sell drugs are part of the private sector.

Religious missions and other NGO's play an important role in the provision of basic health care in Kenya. The activities of the religious organizations are coordinated by the Kenya Catholic Secretariat (KCS), the Christian Health Association of Kenya (CHAK) and the Crescent Medical Aid (CMA). They provide inpatient and outpatient curative care, and in many facilities offer a wide range of MCH/FP services. They operate under the authority and direction of their national or international organizations.

NGOs and missions manage 20 percent of all health facilities and almost one third of the hospitals. Fourteen percent (14%) of all health personnel are employed by NGO/Mission agencies -- one fifth the number of public sector employees.

Religious organizations and other NGOs also have certified training programs, primarily for nurses. However, these programs suffer from a shortage of resources and qualified faculty and access to alternative training opportunities is limited for health personnel employed by the NGOs and private organizations.

Strengthening the capacity of the private sector (NGOs) to plan, design, implement and evaluate appropriate family planning and health services is critical to meeting the immediate and long-term health and population needs of Kenyans.

Health Care Financing and Sustainability

Kenya's high rate of population growth has led to an increased demand for health and other social services. Since Independence, the MOH has tried to meet the demand through the construction of health facilities, the hiring of health personnel, and establishment of educational institutions. However, it has been unable to provide enough drugs, supplies and other resources needed to deliver effective health services and maintain the facilities. The failure to establish an efficient balance between personnel, operational costs and other resources reflects a serious weakness in the organization and management of the health sector.

Kenya's *Health Policy Framework*, published in November 1994, recognizes past failures of the MOH to implement necessary reforms. It outlines specific strategies and objectives for the health sector and gives priority to essential curative and preventive services. It strongly supports the decentralization of management and calls for an increased role for NGOs, municipalities, and the private sector.

The major components of the *Health Policy Framework* are: (i) strengthening the public policy role of the MOH; (ii) the adoption of an essential curative and preventive services

strategy; (iii) decentralization of management to the provincial and district levels; (iv) expansion of the role of the NGO and private sector in curative care and family planning; (v) revenue generation and alternative financing schemes; (vi) improved personnel management and manpower training programs; (vii) the prevention and control of STDs/HIV/AIDS; (viii) a national drug policy and increased availability of drugs and; (ix) organizational change, more effective management, tighter financial controls and the strengthening of information systems.

Funding of the Health Sector

Data from 1993/94 show that the MOH accounted for over 80 percent of the total government disbursements in health, while mission health services received under 6 percent. While MOH local currency expenditures have risen steadily in the past 15 years, in real terms the trend has been one of decline. In addition, the price of drugs, medical equipment and fees have increased.

The GOK's capacity to finance health expenditures during the past decade has been reduced by the depreciation of the shilling, inflation and debt servicing. Allocations from Treasury, however, are not expected to increase in the near future and may continue to decline. The MOH budget is not adequate to meet the National Health, HIV/AIDS/STDs and Family Planning needs.

Analyses indicates that many organizations engaged in providing family planning and health-related services in Kenya are ill-prepared to maintain services if donors were to withdraw their funding. The sustainability of public and private service-providers ultimately depends upon support being provided by stakeholders who believe they receive benefits from these programs that outweigh their costs.

Long-term sustainability of quality health and family planning service delivery in both the public and private sector will require strengthening of health care financing mechanisms and promotion of self-reliance in the procurement of key public health commodities.

The Joint Strategy

The Joint Strategy provides a framework for the implementation of coordinated development assistance between the Governments of Japan (GoJ) and the United States (USG) in accordance with the population and health initiatives of the U.S.-Japan Common Agenda and the Government of Japan's Global Issues Initiative on Population and AIDS (GII).

The Strategy reflects the policy, priorities and technical assistance mechanisms of the GoJ's ODA and USAID. It responds to needs identified in the population and health sector during a joint Japan-U.S. sector assessment conducted in December 1994. The Joint Strategy takes

into account the new health policy of the Government of Kenya and the activities of other donors in the population and health sector.

The Joint Strategy suggests an approach that includes collaboration in program planning, design and evaluation of projects which address the health and population needs in Kenya. Implementation will be through projects managed independently by Japan's ODA agencies and USAID, either directly or through cooperating agencies. The agencies will establish mechanisms to share the results of their individual efforts so that their programs can mutually benefit and collaborate on project monitoring and evaluation.

The GOK and non-governmental partner agencies have and will continue to be involved throughout the planning, implementation and evaluation process of the Joint Strategy.

The strategy outlined in this document should be viewed as the first step in the planning process. Additional discussion between representatives of the respective governments will be necessary to finalize activities.

The Joint Strategy described below highlights the complementarity of USAID's new population and health program "AIDS, Population and Health Integrated Assistance" (APHIA) and on-going and proposed activities for support by the GoJ under the GII.

Building upon the results of the Joint U.S.-Japan sector assessment, the GoJ and USAID are cooperating in the identification and planning of projects and programs in health and population in Kenya. The GoJ has participated in the design of USAID's new program, APHIA. APHIA will have a five year life beginning in September 1995. The total estimated cost of the program is \$100 million.

The GoJ will begin framework design of new population and health activities under the GII/Common Agenda in fiscal year 1995 (April 1995-March 1996). This process will be followed by basic design studies for individual components to be carried out throughout the GII cooperation period (1994-2000). USAID is expected to participate in both the framework and basic design of new GoJ supported projects which, in keeping with the GoJ's commitment to the GII, will represent a significant expansion of Japan's portfolio in the population and health sector.

The findings of the Joint Sector Assessment suggest the following broad categories of need are critical factors in addressing the immediate family planning and health needs of Kenyans and, building Kenya's capacity to sustain health and family planning services over the long-term:

- strengthen the capacity of the public sector to plan, design, implement and evaluate appropriate population and health services;

- strengthen the capacity of the private sector to plan, design, implement and evaluate appropriate population and health services.

The strategy will also involve strengthening the capacity of public and private sector agencies to deliver essential curative and preventive services. The organization of activities around the above need statements provides a framework for a full description of the complementarity of USAID and GoJ supported activities. The need statements have been formulated based upon the findings of the Joint Assessment, USAID/Kenya's O/PHN strategy and the formulation of USAID's APHIA program.

While Population and HIV/AIDS are the target areas of intervention of the GII in Kenya and APHIA, the proposed projects take an integrated approach which includes family planning, HIV/AIDS/STDs, maternal and child, and reproductive health.

Chapter 1

Introduction

1.1 Background

The Governments of Japan and the United States have embarked on a program to coordinate development assistance under the U.S.-Japan Common Agenda on Global Perspectives and the Government of Japan's Global Issues Initiative on Population and AIDS. Kenya is one of the countries selected for the implementation of this initiative. As a result, the Government of Japan (GoJ) and USAID collaborated to produce **The Joint Sector Assessment and Strategy on Health, Population and AIDS in Kenya** which provides the analysis and framework for the implementation of the Common Agenda/GII.

The Joint Sector Assessment (Chapters 2-7) describes and analyzes health status, sector resources and the management capacity of the major service delivery organizations. It outlines the health and development policies of the Kenyan Government, and those of the Governments of Japan and the United States of America (Chapters 8-9) and takes into account assistance programs of other donor agencies.

Building on the Joint Sector Assessment, the Joint Strategy (Chapter 10) outlines a rationale and framework for the implementation of the Common Agenda/GII. It suggests an approach that includes collaboration in program planning, and the design of projects that would be independently implemented through the development assistance agencies of the Governments of Japan and the United States of America. It suggests activities that will require careful coordination, and identifies the respective roles of each agency in the implementation phase. The Joint Strategy takes into account the new health policy of the Government of Kenya and includes policy dialogue with government officials as part of the planning and approval process.

The strategy outlined in this document should be viewed as the first step in the planning process. Additional discussion between representatives of the respective governments will be necessary to finalize the Joint Strategy.

1.1.1 U.S.-Japan Cooperation: Historical Context

In July 1993, the Prime Minister of Japan and the President of the United States announced the U.S.-Japan Common Agenda on Global Perspectives in which the Governments' of Japan and the United States agreed to work cooperatively on issues of global importance. The Common Agenda, which was negotiated under the "Framework for a New Economic Partnership" consists of 21 separate initiatives including: environment, women in development, coral reefs, child health, and population and HIV/AIDS.

Through the United States Agency for International Development (USAID), the United States Government (USG) is expected to provide an estimated \$9 billion worth of development assistance in the population and health sector over a seven year period from 1994-2000. As the lead agency responsible for the USG's international development assistance, USAID is

responsible for the implementation of the population and HIV/AIDS initiative of the Common Agenda.

Under the Global Issues Initiative for Population and AIDS (GII), the Government of Japan has made a global commitment of \$3 billion to support direct and indirect assistance for population and HIV/AIDS over a seven year period from FY 1994-2000. The GII represents an order of magnitude increase in the GoJ's official development assistance (ODA) in the population and health-sector. The GII and the Common Agenda population and HIV/AIDS initiative will be planned and implemented in accordance with the policies and procedures of Japan's ODA. As such, USAID's primary counterparts under the Common Agenda will be the Ministry of Foreign Affairs (MoFA) and the Japan International Cooperation Agency (JICA).

1.1.2 Common Agenda/GII in Kenya

In Kenya, a dialogue between the GoJ and USAID regarding possible coordination of assistance in the population and health sector was initiated in December 1992, prior to the announcement of the GII and Common Agenda.

The first formal GII/Common Agenda meeting was conducted on 25 March 1994. The purpose of this meeting was to share information and outline strategies for possible USAID/GoJ cooperation and collaboration. At that time, the GoJ and USAID agreed that a joint assessment would be necessary to further explore the potential for collaboration in the population and health sector and resolved to make Kenya a model GII/Common Agenda country.

A series of meetings was conducted to explore opportunities for USAID/GoJ collaboration in the expansion of JICA's Population, Education Promotion Project (PEPP) and the design and implementation of Japanese grant aid for the Kenya Medical Training College (KMTC). In addition, in April 1994, USAID facilitated a meeting of USAID-funded NGOs with the Embassy of Japan to discuss the GoJ's Small Scale Grants Assistance (SSGA/Grassroots grants). As a result, six NGOs have been awarded SSGA for the local procurement of durable goods and commodities such as HIV test kits. The GoJ's SSGA has assisted these NGOs in their efforts to integrate HIV/AIDS/STD services within existing family planning and health programs.

In December 1994 - March 1995, a joint population health sector assessment was conducted by JICA and JICA-funded local consultants and senior technical staff from USAID's Bureau for Global Research and Field Support (Global Bureau) and USAID/Kenya Office of Population and Health staff. The findings from this joint assessment are described in Chapter 2-7.

1.1.3 Cooperation in Health and Population

Chapters 8 & 9 provide a description of the development assistance policies of the Governments of Japan and the United States.

Population and HIV/AIDS are the primary focus areas of the GII and USAID's population and health sector program. The focus of the Joint Strategy is on population and HIV/AIDS. Although USAID and the GoJ each bring their own perspective and experience to addressing the needs in this sector, both are concerned with addressing the immediate and compelling health needs of Kenyans and building Kenya's capacity to sustain health and family planning services over the long-term. The Joint Strategy takes into consideration both the short and long-term impact and the comparative advantage of each donor in the Kenyan context.

1.2 The Joint Strategy Process

Building upon the results of the Joint U.S.-Japan sector assessment, the GoJ and USAID are cooperating in the identification and planning of projects and programs in health and population in Kenya. The GoJ has participated in the design of USAID's new program, entitled "AIDS, Population, and Health Integrated Assistance" (APHIA). APHIA will have a five year life beginning in September 1995. The total estimated cost of the program is \$100 million.

The GoJ will begin framework design of new population and health activities under the GII/Common Agenda in fiscal year 1995 (April 1995-March 1996). This process will be followed by basic design studies for individual components to be carried out throughout the GII cooperation period (1994-2000). USAID is expected to participate in both the framework and basic design of new GoJ supported projects which, in keeping with the GoJ's commitment to the GII, will represent a significant expansion of Japan's portfolio in the population and health sector.

The findings of the Joint Sector Assessment suggest the following broad categories of need are critical factors in addressing the immediate family planning and health needs of Kenyans and, building Kenya's capacity to sustain health and family planning services over the long-term:

- Strengthen public sector service delivery, and
- Strengthen private sector service delivery.

The Joint Strategy has been structured around these need statements to highlight the complementarity of USAID's new population and health program APHIA and on-going and proposed activities for support by the GoJ under the GII.

Chapter 2

The Socio-economic, Political and Policy Context

2.1 Background

On December 12, 1963, Kenya gained independence from British rule. In December 1992, after ten years of single-party rule, Kenya held multi-party elections.

Kenya's population of approximately 25.7 million people consist of 43 distinct ethnolinguistic groups. The major groups include the Kikuyu, Luo, Luhya, Kamba, Kalenjin, Mijikenda, Meru, Embu, and Kisii. The population resides within Kenya's 582,000 square kilometres which is divided into 8 provinces and sub-divided into 48 districts.²

Soon after independence in 1963, the Kenya Government formulated various policy measures in the fields of employment, land ownership, business, health, investment in parastatals, and expenditure on education and training. The objectives of Government policy were to transfer economic power to citizens and to remove racial discrimination by a process known as "Kenyanisation."

In employment, the process of Kenyanisation made rapid progress. The percentage of non-citizens in modern sector wage employment decreased rapidly from 8.7 percent in 1967 to 3.6 percent in 1972, and to 1.3 percent in 1982. Currently it is negligible.

In agriculture, Kenyanisation took the form of transfer of ownership of former European owned farms to Kenyans. In the first four years after independence, 2.3 million acres were transferred to Africans, and about half of this land was subdivided for the settlement of approximately 46,000 families.

²Kenya Demographic and Health Survey: 1993, National Council for Population and Development, Central Bureau of Statistics, Office of the Vice President and Ministry of Planning and National Development: Nairobi, Kenya, May, 1994.

2.2 The Economy

While there have been periods of high growth, the Kenyan economy has experienced a downward trend since 1964. Table 2.2 summarizes the trends.

Period Covered	Growth Rate of Real Gross Domestic Product
1964 - 1971	6.5
1972 - 1979	4.9
1980 - 1989	4.3
1990 - 1993	1.8

Tables 2.2: GDP, Real Growth Rates 1964 - 1993

The 1993 Economic Survey (GOK 1993) attributes the recent fall in GDP to:

- a decline in agriculture, secondary to poor coffee and tea prices; and ethnic clashes and bad weather, which disrupted agricultural production;
- the suspension of foreign aid by donors in 1991; and
- the increase in the money supply to "an unprecedented 35 percent" in 1992.

2.2.1 Inflation

During Kenya's first decade of independence, inflation remained relatively low. After the dramatic increase in oil prices in 1972, the annual rate of inflation was usually in the 10 to 20 percent range. The 1990s have been characterized by very high inflation. The inflation rate rose from 19.6 in 1991 to over 27 percent in 1992. For 1993 it was estimated at 46 percent. In 1994, the Kenya Shilling appreciated and the rate of inflation appears to have decreased.

2.2.2 Employment

With a population estimated to be 25.7 million in 1994 (GOK 1994a), the total Kenyan labor force is about 11 million. Approximately 20 percent of the labor force is unemployed. The 1994-1996 National Development Plan anticipates a growth in employment and a slight reduction in the number of unemployed residents. It expects the bulk of new jobs to be generated in the rural economy and the urban informal sector. Employment in the public sector, which has grown by an average of 3.6 percent

annually, will decrease to a rate of less than two percent through retrenchment and redeployment processes called for by the Civil Service Reform Programme.

2.3 Welfare Indicators

Various welfare indicators, as measured by the International Human Suffering Index (HSI) are available for different years in Kenya:

- **Nutrition:** Calorie supply per capita for Kenya in 1989 was 2,163 units. This was below the recommended level of 2,300 units. Increased population with stagnant agricultural production since 1989 have probably reduced the per capita supply even further.
- **Water:** The 1993 DHS (NCPD 1994 a) found that half of Kenyan households reported receiving their water from wells or piped water systems. The GOK/UNICEF Household Welfare Monitoring and Evaluation Surveys showed wide geographic, seasonal and socio-economic variations, which suggested that only 31 percent of the population has year-round access to a safe water supply.
- **Illiteracy rate (the percentage of the population over age 15 years who cannot read):** A literacy survey in 1988 revealed that over 45 percent of the adult Kenyan population can not read.

2.4 Gender issues

The 1994-1996 National Development Plan is the first to address the status of women and their role in development. This section focuses on the current situation of women in Kenya, and Government policy to improve their status. The Plan states that:

Development projects have tended to marginalize women and isolate them from opportunities to participate in development and decision making at the national level. Despite the large contribution by women in development projects at the community level, the projects identified have not responded to the women's needs.

2.4.1 Agriculture and Food Supply

- About 87 percent of female population reside in rural areas, where most are involved in agricultural production.
- Women provide 75 percent of the labor used in small holdings.

- Women contribute 80 percent of labor in household food crop production and 50 percent of labor in cash crop production.
- Women contribute 95 percent of labor needed for family and household maintenance.

The 1994-96 National Development Plan recognizes that, in spite of their importance, rural women have not been targeted in previous development plans, and have actually been marginalized by laws and customs which afford them less rights than men. The Plan calls for measures to:

- improve agricultural planning and project implementation, so as to mobilize more support for women's multiple responsibilities as food and cash producers and as household maintainers;
- increase women's access to land rights and extension services in order to improve their participation in agricultural and rural development.

2.4.2 Employment

Women currently account for slightly over 25 per cent of the formal labor force, and most are employed by the public sector. The Civil Service Reform may, therefore, disproportionately affect them. According to the 1994 - 1996 National Development Plan, the Government intends to "ensure that women are allowed higher occupational choices in all sectors of the economy, through expansion of education and other opportunities. . . ." Specific measures include:

- A study and re-examination of the legal status of women in the country with a view to giving them equal rights in access to productive assets, to employment and the removal of all discriminatory practices that have continued to marginalize women;
- Advocacy for establishing appropriate career guidance mechanisms for women in employment;
- The development and implementation of mechanisms, in liaison with NGOs and donor agencies, to empower the very poor and vulnerable categories of women. Particular attention will be paid to female headed households, females in ASAL areas, females in especially difficult circumstances and handicapped females;
- The development and design of appropriate occupational health and safety policies and programs for women at work places.

2.4.3 Education and Literacy

Currently, females are disadvantaged at all levels of education in terms of access, participation, graduation rates and performance. The Government will endeavor to:

- Create comprehensive data on the situation of the Girl Child in Kenya with particular reference to the poor urban, poor rural, nomadic, school dropouts and adolescent mothers;
- Start a program to monitor and follow-up school drop-outs with particular reference to adolescent mothers and immediate policy change towards facilitating their rehabilitation and re-entry into the educational system;
- Accelerate the implementation of family life education programs and empowerment of parents and teachers for improved counselling and support, and provision of role models;
- Initiate community mobilization and sensitization in support of the Girl Child with particular reference to influencing socio-cultural and household dynamics and overcoming differential treatment of girl and boys;
- Initiate the gradual removal of all stereotyping of gender roles in educational materials and text books, and the provision of appropriate role models;
- Improve the learning environment of the Girl Child with particular reference to reduction of workload, curriculum relevance and empowering learning materials.

2.5 Environment

The most serious environmental problem in Kenya is the destruction of forests. This is mainly caused by the conversion of forests into farm land due to increased population pressures, logging for building and charcoal making, and the use of wood for household energy. Wood fuel accounts for more than 70 percent of fuels used in Kenya, and supplies more than 95 percent of energy needs in rural areas. The forests are important not only for fuel, but for wildlife, water and soil conservation and prevention of floods (JICA, 1992a).

Because all of the population cannot be accommodated on arable land, many families are being forced into the ASAL areas, causing further destruction of these fragile areas and destruction of the ecosystem. The high population growth has also caused rapid growth in urban areas and a deterioration of the urban environment. Industrial development has added to urban problems with water pollution from industrial wastewater, and air pollution from factories and vehicle exhaust (JICA, 1992a).

While the Government of Kenya has done a great deal to protect wildlife in recent years, poaching caused the number of rhinoceroses to be reduced from 2,000 in 1973 to 350 in 1987. The elephant population was reduced from 130,000 to 20,000 during the same time period. Population pressures will continue to threaten the wildlife in Kenya.

There is a lack of human and institutional resources to resolve these problems, and basic legislation for environmental quality standards have not been established. The 1994-96 National Development Plan states that the Government, in conjunction with the private sector, will:

- create more awareness among policy makers and the general public of issues related to the environment;
- protect the environment from human destruction, toxic waste and natural causes through properly enforced policies;
- identify and develop alternative sources of energy; and
- develop technologies that promote a more efficient use of energy.

2.6 Governance and Corruption

Corruption is a problem in Kenya. The GOK Controller and Auditor-General reports provide some of the most detailed information on theft and fraud, and have been used in this section to document the problem. But the issue of good governance is not only one of honesty, but also one of good management. For example, while the Health Care Financing Secretariat estimates that up to 35 percent of collected fees are lost through dishonest procurement practices and fraud, reviews of the problem of drug shortage in the MOH revealed that more drugs had been lost to expiry than to theft. (*Management problems in the MOH are examined in Chapter 7 of this report.*)

Good governance is also a matter of development. As the Government of Japan points out in its Country Study for Development of Assistance to the Republic of Kenya:

... by promoting education at the grass-roots level in which there shall in the future be no community with an illiterate family nor a family with an illiterate person. to enable them to break off their "bad old habits", the prevention of bribery and corruption and the improvement of living standards of the people to win trust from within and outside the country. (JICA 1992a).

The Kenyan Government has two major mechanisms for dealing with corruption. One, an Anti-Corruption Squad has the mandate to deal with cases of theft, fraud and corruption by civil servants and employees of the parastatals. The other, the Office of the Controller and Auditor General, serves as a watchdog over government expenditures

and audits the accounts of Government offices at least once a year. The 1992/93 Controller and Auditor-General's Report (GOK, 1994b) documents many cases of theft, fraud and "irregular unauthorized expenditures".

However, the report states that officers, who are confirmed by Parliament to have committed offenses outlined in the Report, are only surcharged KPounds 20 (KSh 400). This may in part explain the notoriety with which malpractice continues to recur within ministries. The Report recommends that these officers be treated as criminals and dealt with accordingly.

Soon after the Anti-Corruption Squad began working, a number of senior officers in the MOH were arrested and charged in the courts for various alleged offenses ranging from embezzlement of funds to theft of medical items. A drug supplier was also arrested and charged with colluding with Government officials and embezzling substantial amount of money. To date none of these cases have been tried, and some of the involved officers have been re-instated.

Government audit reports highlight the following key problem areas of malpractice within the MOH:

- **Fraudulent claims:** Payments have been made with fictitious reasons given to justify the payments.
- **Fictitious payments:** Payments have been made to unknown persons.
- **Payments for goods not received:** Supplies have been paid for even though they have never been received.
- **Unvouched and irregular expenditures:** Cost-sharing funds have collected but not deposited into the appropriate bank accounts, and funds have been removed without explanation or record.
- **Irregular payment of compensation for Currency Exchange Rate Fluctuation:** Payments were made in 1992 to suppliers of drugs which had been delivered to the MOH 12 years earlier and therefore not been affected by the currency fluctuations.

Donor audit reports also highlight considerable accounting problems and possible thefts of funds.

2.7 Health Policy

This section focuses on the Health Sector of Kenya, with emphasis on Government Policy and Financing.

2.7.1 Policy: A Brief History

At Independence in 1963, the Government gave a high priority to the improvement of the health status of Kenyans. The Sessional Paper No. 10 (1963/65), "African Socialism and its Application to Planning in Kenya," included plans for a more equitable distribution of income, access to education and health services, and a long term objective to provide free basic health services to all citizens. In 1965, Kenya introduced free outpatient medical services.

The 1974-78 Development Plan expanded a capital investment program targeted to rural areas, and a training program for non-physician health personnel. This plan emphasized the role of the health center as

... the linchpin of public health policy, while recognizing its importance as the coordinator of both curative and preventive medicine in rural areas.

Health policy guidelines in each of the successive National Development plans continued to emphasize preventive strategies and targeting of the rural sector. The 1984-1988 Development Plan added plans for decentralization of management to the district level, and called for increased support to Preventive and Promotive Health Programs and MCH/FP services. However, in 1994, the MOH still spends 70 percent of its resources on hospitals, deploys 34 percent of its staff to urban areas, and relies heavily on donors to fund the MCH/FP programs.

2.7.2 Policy: Current and Future

On December 15, 1994, the GOK/MOH released a major new statement on health policy entitled, Kenya Health Policy Framework (MOH 1994a). The Policy Framework recognizes the shortcomings of the MOH in implementing its policy and offers specific activities and targets for overcoming them. It states that "The chronic underfunding of primary health care will end." It envisions that the Central Ministry will be transformed from that of a provider of services to that of a policy maker and regulator. Management will be decentralized, and NGO, Local Authority and Mission and Private sectors will be encouraged to provide a greater share of the provision of curative services.

The following sections will examine the Policy Framework in the key issues of Financing, the Role of Other Health Care Providers, Decentralization, Manpower and Drugs.

Health Care Financing Policy

In 1989 the Ministry started cost-sharing in its hospitals and health centers. It was suspended because it was politically unpopular, and then modified and re-instituted in 1992 as the Facility Improvement Fund (FIF). Three quarters of the revenues collected are used at the collecting facility directly to improve patient care services, and one quarter is set aside for district level expenditure on Primary Health Care.

In 1991 the MOH, with technical and grant assistance provided under USAID's Kenya Health Care Financing Project, established the MOH Health Care Financing (HCF) Secretariat. The HCF Secretariat has played a critical role in the phased reintroduction of cost sharing in Kenya, and has demonstrated clear progress in institutionalizing systems and procedures central to the implementation of cost sharing. The Secretariat is responsible for the monitoring and supervision of the national cost sharing program, including the training and supervision of provincial, district and hospital staff, and District Health Management Boards. It also reviews and approves expenditure plans for cost sharing revenues, and fees.

The overall objective of Health Care Financing is "to expand the Ministry's role in primary and preventive health services, while ensuring public access to essential curative health services through a combination of public, private and mission/NGO clinical services. . . ." (MOH 1993a)

Specific strategies for achieving these objectives are: (MOH 1993a)

- i) Increase public funding for primary and preventive health services from the current 20 percent to 30 percent of the total recurrent expenditure for the ministry's financing of Preventive/Primary Health Care Programs (P/PHC);
- ii) Increase Ministry of Health revenue generation: Current FIF revenues represent about 7 percent of the non-staff recurrent budget (3% of total budget). Over the next five years this amount is expected to increase to 30 percent of non-staff expenditure (12% of total budget);
- iii) Contain and target Governmental Expenditures for Curative Care: Currently the MOH provides 50 percent of in-patient care and about 40 percent of out-patient curative services. Through carefully spelt out measures the Government hopes to reduce from 50 percent to 40 percent its portion of funded in-patient curative services and from 40 percent to 30 percent of out-patient care in the next decade. The projected increase in demand for curative services will be met through increases in private, mission and other non-governmental care;
- iv) Increase the share of curative care by non-governmental sources by:

- reducing government imposed costs and constraints (e.g. duties, taxes, licensing fees, etc.)
- expanding insurance coverage and benefits.

iv) Expand the role of NHIF and other Social Financing Mechanisms by:

- Increasing efforts to develop community financing mechanisms,
- Strengthening the role of NHIF as a Social Insurance Scheme,
- Increasing the population covered by health insurance,
- Broadening the benefits provided by insurance companies and NHIF.

Policy towards the NGO, Local Authority, Private and Mission Sector Health Service Providers

The MOH plans to create an "Enabling Environment" to encourage NGOs, Local Authorities, and the Mission and Private sectors to take on a greater share of the provision of health services. The MOH may subsidize or contract these services, or may provide incentives to establish private practice in underserved areas. Licensing for private practice, and the regulations regarding part-time private practice for MOH employees will be revised in order to make these easier. The Central Ministry will concern itself with regulating the standards of ethics and quality of care.

Decentralization Policy

The District Focus for Rural Development, which was initiated in the early 1980s, planned for the district to be the administrative focus for all development including the delivery of health care services. District Development Plans are compiled by the Ministry of Planning and National Development and circulated to all District Development Committees, which are responsible for cross-sectoral district planning.

The District Health Management Boards (DHMB) were created in 1992 with the re-introduction of cost-sharing. Board members include representatives from the MOH, District Administration, local NGOs, religious organizations and the local community. Currently, the DHMB are only concerned with Cost Sharing funds, but they do produce and submit plans for the health sector to the District Development Committee. However, these plans are not compiled in consultation with MOH central planning. According to the Health Policy Framework, the DHMB plans are:

rarely taken into consideration in national planning and budgeting, and the center (MOH) does not usually provide any feedback to districts on their submissions. There is, therefore, little relationship between plans, available funds and actual implementation. . . Insufficient attention is paid to recurrent cost implication and the long-term sustainability of benefits (MOH 1994a).

The Paper states that the Ministry wants the DHMBs to assume more responsibility in closer cooperation with the central ministry. In addition, Hospital Management Boards (HMB) will be created to manage MOH hospitals. Provincial Medical Offices will be converted into an "inspectorate arm" of the Ministry in order to monitor the performance of the district management. The Paper calls for training, material support and improved financial systems for these management teams and boards. The details of how and what will happen will be spelled out in another National Policy paper on Decentralization in the Health Sector.

Manpower Policy

The Ministry is finalizing a major study designed to reformulate its National Manpower and Training policies. Changes to the current system will include:

- Personnel will be deployed to the peripheral dispensaries and health centers which should reduce workload at the hospitals.
- Staffing norms will be enforced that will correct imbalances between provinces, between rural and urban health services and between in-patient services and out-patient and community based services.
- Training curricula will be reformed to ensure that health professionals have a high level of skill to deal with the major health problems, in prevention strategies as well as in curative care.
- Continuing Education will be strengthened and based upon local district assessment of training needs with on-going monitoring and adjustments based on local epidemiological data.
- Personnel Management will be strengthened to increase effectiveness and efficiency, and terms of service will be improved. Hardship allowances and other incentives to retain qualified staff will be established (MOH 1994a).

National Drug Policy

In 1994, the GOK/MOH released The Kenya National Drug Policy document (MOH 1994b). The goal of the new National Drug Policy (NDP) "is to use available resources to develop pharmaceutical services to meet the requirements of all Kenyans in the Prevention, Diagnosis and Treatment of diseases using efficacious, high quality, safe and cost effective pharmaceutical products."

The comprehensive policy document covers in detail the areas of drug supply to both the public and private sector. It addresses regulatory control of drug scheduling and registration, rational drug use, quality assurance, importation and export of drugs, drug abuse, local production of drugs and establishes a monitoring and evaluation unit within

the MOH to oversee the implementation of the NDP. In addition, the new policy explicitly exempts imported condoms and family planning commodities from duty and VAT.

In line with the above policy some achievements have been made in the area of rational drug use. Hospitals are forming pharmacy and therapeutic committees to oversee drug selection and formulary management, formulate policies on prescriptions and monitor drug utilization. A national quality control laboratory has been set up and will soon be fully operational. Clinical guidelines for the diagnosis and treatment of common hospital conditions in Kenya have been developed and will form the basis for diagnosis and treatment at provincial, district and sub-district hospitals.

2.7.3 Funding the Health Sector

In 1993/94 approximately half of the total expenditure on health was through the GOK. The MOH accounted for over 80 percent of the total government disbursements in health, while mission health services received under 6 percent of the total. Over the counter expenditures on pharmaceuticals accounted for 24 percent of expenditures (MOH 1994b).

Gross Recurrent Expenditure by Provider 1993/94		
Service Provider	Amount KSh (000)	Percent
Government	1,441,600	50%
Missions	168,900	6%
Private (include drugs)	1,254,100	44%

Table 2.7.1: Based upon data from: MOH, 1994a:8

MOH local currency expenditures have risen steadily from K 50 million pounds in 1979/80 to over K 175 million pounds in 1991/1992 and are expected to rise to K 350 million pounds in 1996/97. In real terms, however, the trend has been one of decline. In 1980/81, per capita expenditures on health were US\$ 9.50 but fell to US\$ 4.50 in 1991/92 (MOH 1994a). The recent appreciation of the shilling may reverse this trend slightly. Table 2.7.2 presents the recurrent budget expenditures of the Ministry of Health.

Ministry of Health Recurrent Budget Expenditures
(Internal Allocations, as percentage of Government Total and in US \$ per capita)

Y E A R	Total Kenya Pounds (000)	CURATIVE Percent	RURAL & P/PIC Percent	ADMIN & TRAINING Percent	NON DRUG SUPPLIES and RESEARCH	The MOH as % of GOK Budget	US \$ Dollars per Capita
80/81	52,868,619	66.8	15.7	11.4	4.5	9.4	\$9.55
83/84	61,765,853	72.4	11.6	14.6	1.5	8.8	\$5.36
85/86	79,653,593	71.8	12.9	10.1	5.2	9.3	\$5.35
87/88	101,014,500	78.2	10.5	9.6	1.8	8.4	\$5.76
89/90	115,032,567	69.4	18.9	10.6	1.1	7.9	\$5.54
91/92	147,833,073	67.8	21.6	9.3	1.3	8.5	\$4.50

Table 2.7.2: Based on MOH 1994a:10: Modified.

The MOH share of general Government recurrent expenditure has declined from 9.5 percent in 1980/81 to 8.5 percent in 1991/92. It is expected to be 7.6 percent in 1994/95.

The overall performance of the Kenyan economy had the following adverse effects upon the health sector:

- i. The devaluation of the Kenya Shilling reduced the value of the budget line item for drugs and dressings by 53 percent from US \$13.6 million in July 1992 to US \$5 million in July 1993;
- ii. There was a marked escalation in prices of pharmaceuticals, medical equipment and their spare parts, as well fuel and most domestic consumer goods;
- iii. The cost of drugs from the chemists and charges for private health care services increased rapidly. This increased the demand at GOK health facilities which have much lower charges or are provided free; and
- iv. The erosion of real wages by 12 percent and the increased prices of consumer goods led civil servants, including health professionals employed by the MOH, to reduce their level of effort in order to seek other means of meeting their needs.

Several factors have worked to limit Government financing of national health needs. They include:

- Recurrent over-runs of Government spending. From the controller and auditor general this over-run in 1992/93 amounted to K Pounds 625,105,391;

- A mounting burden of debt service;
- The depreciation in the value of the shilling (through the end of 1993);
- Increasing inflation (brought under control during the second half of 1994).

It is unlikely that MOH allocations from Treasury will increase in the near future. Indeed they may continue to decline.

Table 2.7.3 below shows the combined recurrent and development budgets by source from 1992 to 1996.

YEAR	TOTAL(Kenya Pounds)	GOK	DONORS	GOK (percent)
1992/93	286,494,589	200,299,263	86,195,326	69.9%
1993/94	310,947,827	233,946,610	87,001,217	72.0%
1994/95	343,916,500	255,364,811	81,551,689	74.3%
1995/96	375,833,659	269,227,550	106,606,109	71.6%

Table 2.7.3: Combined Recurrent and Development Budgets by Source of Finance (MOH 1994a)

Donor inputs amount to about 30 percent of total MOH expenditures. This, however, represents about 80 percent of the Development budget. Donor inputs into the recurrent budget have been for the supply of commodities to:

- the Essential Drug Programme;
- Kenya Expanded Programme on Immunization; and
- the Family Planning Programme.

Shortages of drugs and other medical supplies are a chronic problem countrywide. The MOH allocation for drugs and dressings is only able to meet approximately 20 percent of the national needs for these commodities.

Personal emoluments take up to 70 percent of the Ministry's recurrent budget but there are limited possibilities of controlling this wage bill. It remains to be seen how the ongoing retrenchment and re-deployment program will be implemented and ultimately affect the MOH.

In 1992/93 the MOH carried forward pending bills of Kenya Pounds 16,295,093 (US \$6,934,082). It is evident that the MOH Budget is inadequate to meet the National Health, HIV/AIDS/STDs and Family Planning needs.

2.8 Strategic Implications

- 1. Those within and outside government have a role to play to ensure that the reform agenda in the Health Policy Framework is implemented.**
- 2. Encourage the GOK to implement the reform agenda in the Health Policy Framework.**
- 3. Link donor support to the health sector to the GOK's progress in implementing the reform agenda. The donor community could monitor the programs and periodically evaluate their impact.**
- 4. Develop and implement the policy and strategic objectives in the Policy Framework through concrete plans, programs and projects. These must be prioritized, and analyzed in terms of costs and potential impact on health status.**
- 5. Establish a multisectoral planning group to formulate the concrete plans needed to carry out the reform agenda. The planning process will be directed by the MOH but should involve representatives from NGOs, the private sectors and donor agencies.**

Chapter 3

Health Problems of Kenya

3.1 Background and Overview

Kenya has made substantial gains in improving the health status of its people since Independence. Life expectancy has increased from 44 years to 60 years. The Infant Mortality Rate has been halved, and the Child Mortality Rate reduced by one-third. Most of these gains were made in the first 10 to 15 years after Independence. Sometime between the mid 1970s and the early 1980s, declines in mortality began to stagnate.

Indicator	1963	1993
Life expectancy	44 years	60 years
Crude Death Rate (CDR) (deaths/1,000 population)	20	12
Infant Mortality Rate (IMR) (deaths 0-12 months/1000 live births)	120	62
Under 5 Mortality Rate (deaths among children under 5 years of age/1000 live births)	156	96
<i>Sources: Kenya's Health Policy Framework, 1994 and DHS 1993</i>		

Table 3.1. Vital Statistics

One of the reasons for limited improvement in vital statistics during the past decade is that the incidence of the major causes of mortality -- malaria, pneumonia, and diarrhea -- has not changed.

AIDS and HIV related diseases are also adding to the burden of disease in Kenya. While they are not yet the major causes of morbidity and mortality, they will be in the near future. (NACP 1994a). HIV, AIDS and Sexually Transmitted Diseases are discussed in Chapter 4 of this report.

High fertility rates and high population growth have also had a significant effect on health status in Kenya. While both are declining, population growth will continue to strain the resources of the health sector. The National AIDS Control Programme (NACP) and the National Council for Population and Development (NCPD) predict that by the year 2005 the

population growth rate would decline to 2.5 percent, if there were no AIDS in Kenya. With AIDS, they expect it to be 1.7 percent per year (NACP 1994a). With either prediction, there will be at least one and half times as many Kenyans alive and needing health care in the next decade. These issues are discussed in Chapter 5. Family Planning and Reproductive Health.

3.2 Sources and Quality of Epidemiological Data

The Health Policy Framework states: "The burden of disease in Kenya is not well quantified, and much needs to be done to improve the availability and reliability of available information... (MOH 1994a:15)." Although there are serious deficiencies in data quality and analysis, relative rates of morbidity and mortality can still be estimated.

There are several sources of data on morbidity and mortality. Facility-based data is available from the Ministry of Health. Although reporting is incomplete, the MOH Health Information System (HIS) has more data on out-patient morbidity and in-patient morbidity and mortality than any other source. While the majority of the data is from MOH facilities, some mission and private facilities also report to the MOH. These figures cover only facility attenders and are not adjusted for variations in reporting rates from the individual districts and facilities, and therefore their absolute numbers can be misleading.

Community and household-based data are found in the Kenya Demographic and Health Survey (KDHS) of 1989 and 1993. The 1993 KDHS was designed to provide representative data for urban and rural areas, provinces and national level.

The 1994 edition of AIDS in Kenya prepared by the National AIDS Control Programme, the Ministry of Health and the National Council for Population and Development contains valuable statistics from Sentinel Surveillance Sites. It estimates the true prevalence of HIV, AIDS and tuberculosis from these statistics, from research studies and from experiences in other countries. Finally it makes predictions to the year 2005 on the burden of disease from HIV.

3.3 Morbidity: A Comparison of Community and Facility Based Data

Community-based data support the finding in many countries that facility-based data (the official MOH/HIS reports) under represent the true incidence of disease. For example, the 1993 DHS reports that only 50 percent of children with fever, cough or rapid breathing, and only 40 percent of children with diarrhoea are taken to a health facility. This suggests that the true incidence in children might be two to three times higher than the reported incidence. The KDHS does not report on prevalence in adults, and there is no information on the percentage of adults with diarrhea and fever who seek care in a health facility. A longitudinal malaria study of all age groups in Kilifi found that only 30 percent of cases of malaria presented to a health center, and 100 percent of these had already taken some form of medicine purchased in a "commercial outlet." These reports suggest that less than one third of disease is actually seen in a facility, and less than

half the facilities in the country report to the MOH. While the data greatly underestimate the numbers of illnesses, the community and facility based statistics do support each other in the relative importance of different diseases.

Major causes of morbidity are malaria, acute respiratory infection (ARI) and diarrhea at both the community level and the facility level. Since the MOH/HIS data is the most comprehensive, in that it provides data on the entire country and through all seasons, the following discussion is based on the HIS reports.

3.3.1. Out-Patient Morbidity (Data from the MOH HIS Annual Reports)

Malaria, acute respiratory infections and diarrhoea accounted for 54 percent of reported visits to out-patient facilities in 1992 (the most recent year for which data is reported). Intestinal parasites accounted for another five percent, and skin diseases, another nine percent. (The category of "skin" includes genital ulcers in the reporting format of the MOH. It is not possible to tell what percentage of this category is attributable to sexually transmitted diseases and what is attributable to poor hygiene.) Figure 3.3.1 shows the 1992 pattern of morbidity in Kenya.

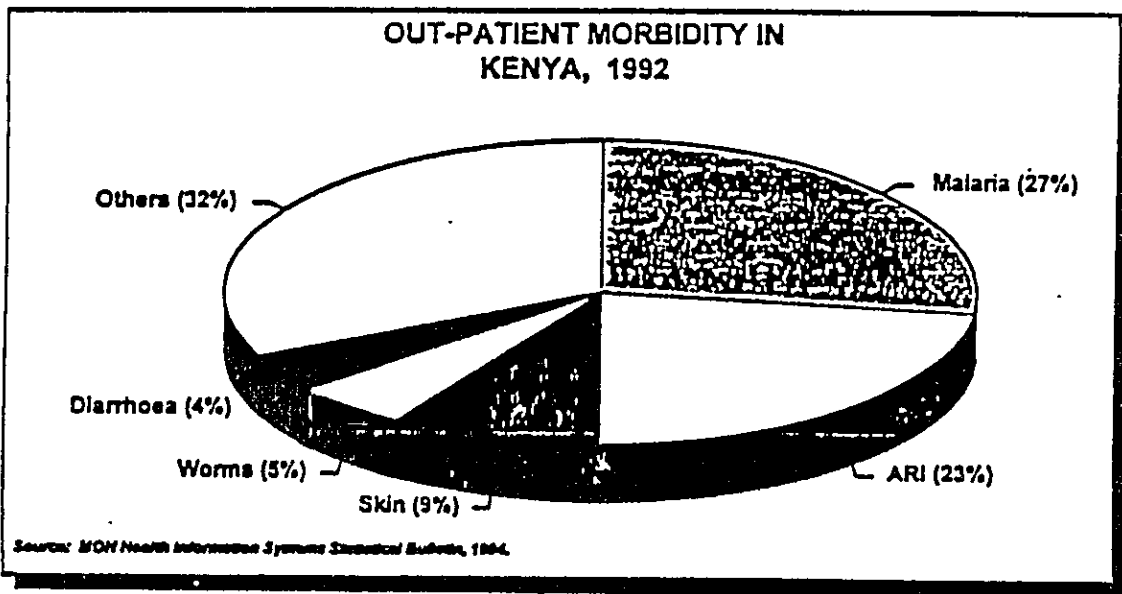


Figure 3.3.1: Out-patient Morbidity In Kenya, 1992.

Figure 3.3.2, on the following page, is a graph based on the 1987 MOH Annual Report of the Health Information System (MOH 1989:59). The statisticians adjusted data from 1984 through 1987 for full reporting and determined the number of cases of each disease per 100,000 people. As the graph shows, there was very little change in the incidence of the major diseases over the five year period from 1983 to 1987. The 1992 data have been added to this graph. The 1992

data were not adjusted in the same way as the 1984 to 1987 data, and therefore the apparent small rises may not be real. That adjustment, however, would not change the conclusion: The leading causes of morbidity in Kenya have not changed in the past ten years.

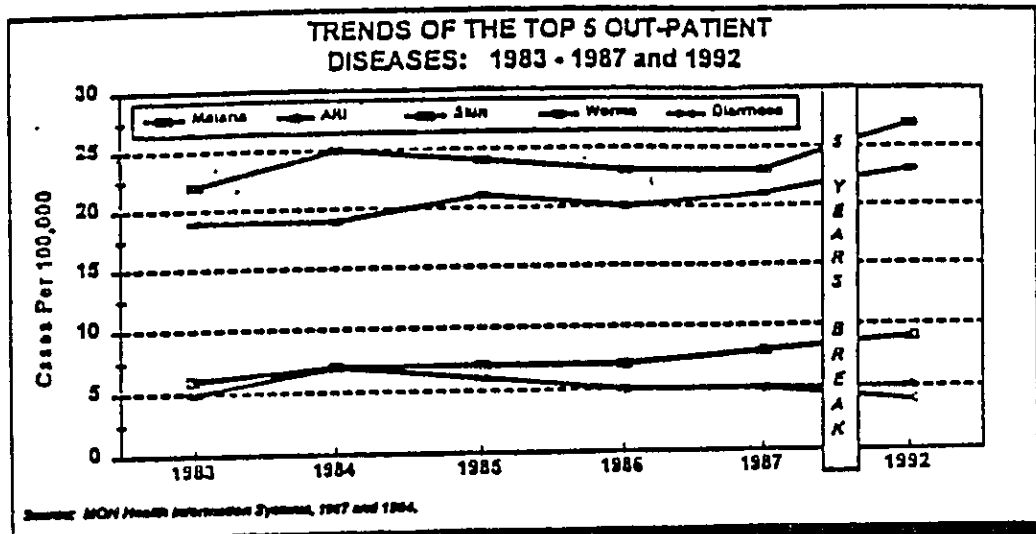


Figure 3.3.2: Outpatient Disease Trends

3.3.2. In-Patient Morbidity (Data from the MOH HIS Annual Reports)

The majority of the Ministry of Health expenditures are for in-patient care. The MOH in-patient statistics from 1980 and 1990 were compared for this report. The reporting for both years was incomplete, and the raw data for 1980 is not available. The general trend, however, is similar to that reported in the out-patient morbidity profile. One of the major reasons for hospital admission is, and was in 1980, Normal Uncomplicated Deliveries. Malaria, pneumonia, and diarrhea were the major illnesses requiring hospital admission in both 1980 and 1990. Measles was the third major cause in 1980, but is now in fourth place.

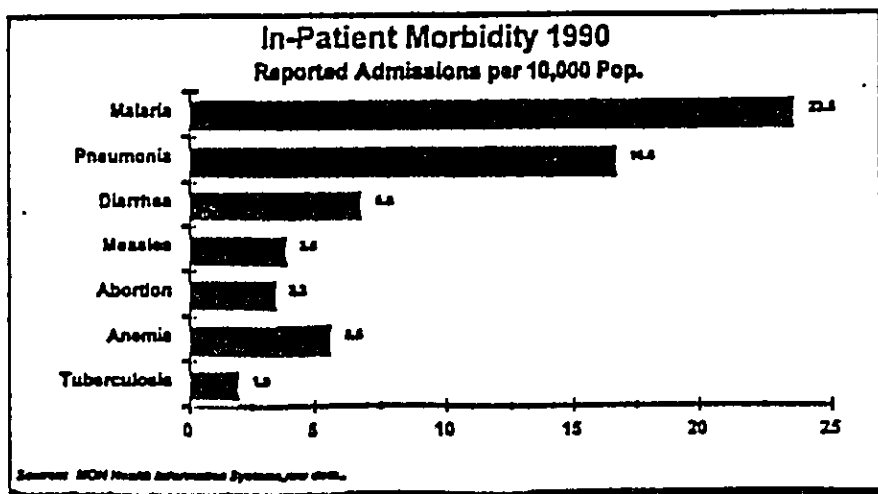


Figure 3.3.3: In-Patient Morbidity 1990 (data on normal deliveries excluded).

Problems associated with abortions and tuberculosis represent between two and three percent of admissions. These proportions have not changed in the past 10 years.

3.4 Mortality

Mortality data is very incomplete. The only community-based data available is from the KDHS. The KDHS survey calculate the mortality rates of children under five, but do not cite the causes of mortality. Data on hospital deaths is the only estimate available for causes of adult mortality. 1989 census data on mortality is not yet available.

3.4.1 Infant and Child Mortality

The 1989 and 1993 Kenya Demographic Health Surveys examine infant, child and under-five mortality rates from 1974 through 1993. The most dramatic falls in the rates occurred in the 1960's and early 1970's. Since then there has been little improvement (see Figure 3.4.1 below, KDHS 1993 p. 85 and KDHS 1989 p. 59).

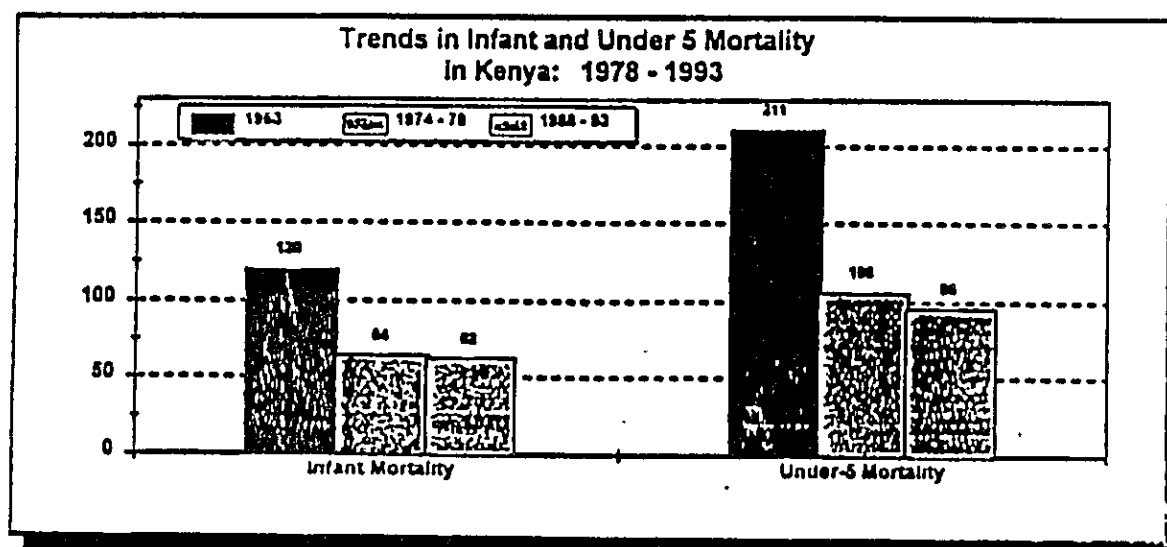


Figure 3.4.1: Trends in Infant & Child Mortality in Kenya.

There are important regional differences in health status which have implications for health policy and investment strategies. Nyanza and Western Provinces have the highest rates of under 5 mortality in the country. The mortality rates are between 1.7 and 4.5 times greater than those for Eastern, Rift Valley and Central provinces (NCPD 1994a:86).

The major causes of mortality for children under 5 are malaria, acute respiratory infection, diarrhea and complications of birth and the peri-natal period. There are substantial regional

variations in these causes. In Nyanza and Western provinces, the leading cause of death in children is malaria. The MOH estimates that malaria accounts for at least 30 to 50 percent of all deaths in highly endemic areas (MOH 1994a). While it is not the leading cause of death in the neonatal period, it is a contributor. During pregnancy, the malaria parasite concentrates in the placenta, where it is difficult to kill, either by the mother's immune system or with drugs. The malaria parasites interfere with the growth of the fetus, and these children are born with a low birth weight, which puts them at a higher risk for neonatal death.

3.4.2 Mortality in Hospitals

Data on hospital fatality rates of the major diseases in 1980 and in 1990 are available, since the number of admissions for each category of illness and the number of in-hospital deaths is recorded in the MOH HIS reports. Figure 3.4.2 displays the trends of in-hospital case fatality rates between the years of 1980 and 1990. As can be seen by the graph, case fatality rates have increased for all of the major causes of illness except for measles. For malaria the case fatality rate has almost doubled.

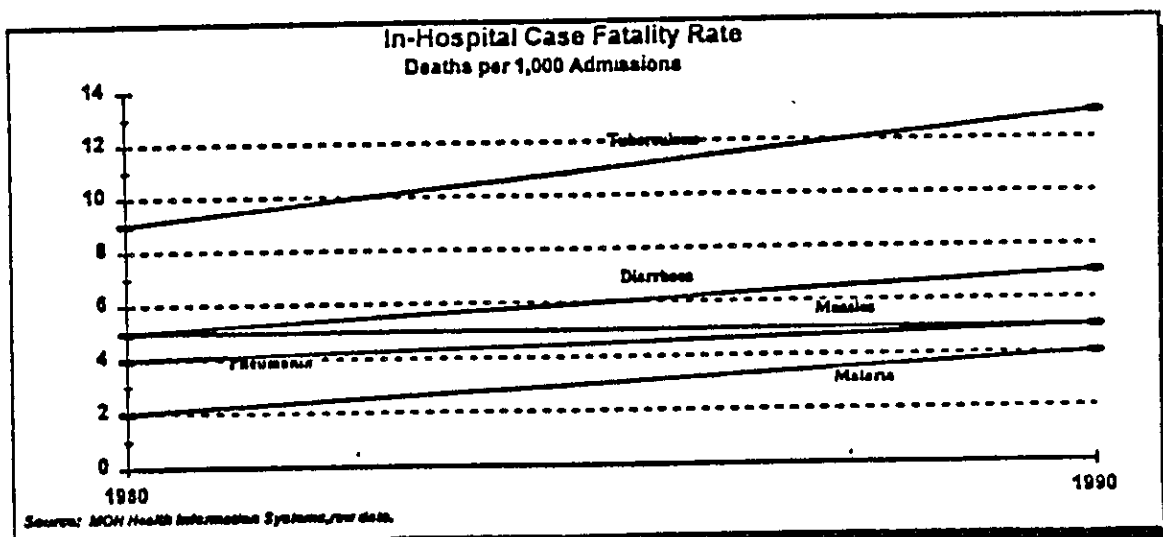


Figure 3.4.2 Hospital Case Fatality Rates - 1980 & 1990.

This suggests that even though the majority of the Ministry of Health's resources have been dedicated to hospitals, a person's chance of dying during hospitalization for a preventable or treatable infectious disease has actually increased over the past decade.

3.5 The Success Story: Vaccine Preventable Diseases

Measles, whooping cough, polio, tetanus, and diphtheria are all on the decline in the Kenya. The immunization campaigns against these diseases have been the major contributors to the reduction in mortality and morbidity in Kenya. KEPI (Kenya Expanded Programme on Immunization) training has been incorporated into the basic curricula of health professionals. Parents want and seek vaccinations for their children. The major weakness of the immunization program is that it has been almost exclusively donor funded.

3.6 The Technical Feasibility of Solving the Major Causes of Disease

Simple, low cost mechanisms for reducing the burden of disease from malaria, acute respiratory infections and diarrhea exist. The problem in Kenya is that these strategies are not being fully implemented. One reason is that simple curative drugs are often not available in health facilities. Another reason is that health professionals are not adequately trained in the prevention and management of these diseases. In addition, the Ministry of Health is slow to adopt new strategies and treatments. Research findings into the causes, prevention and treatment of disease are not incorporated into MOH policy. The following section will examine each of these diseases, the known effective strategies, and the current obstacles to their implementation.

3.6.1 Malaria

Malaria requires a combination of environmental control, community education and effective treatment. Environmental control focuses on the killing of mosquitoes, the elimination of their breeding sites, and the reduction of their ability to feed on human beings. Effective treatment relies on correct diagnosis and the selection of an appropriate medication. Community education is required for teaching people how to assist in environmental control measures (e.g. clearing of breeding sites, using bednets) and in how to seek appropriate treatment. Eradication of malaria may not be feasible in the near future, but the number of malaria cases can be dramatically reduced.

Teaching health professionals and community members in the appropriate use of drugs is very important. One of the reasons for the great problems with resistance of malaria is the improper use of chloroquine. People commonly take only a partial dose because they are sold an incorrect amount, they don't want to pay for a full course, they don't like the taste, and/or they see no reason for continuing it once they are feeling better. Introducing new drugs without proper education of diagnosticians, pharmacists and the general public will only foster more resistance.

The Kenyan health professionals responsible for environmental control and community education are the Public Health Officers and Technicians. These health professionals are trained in the MTCs. The Public Health Officers (PHO) are trained in a diploma course and are the supervisors of the Public Health Technicians. The Public Health Technicians (PHT) are trained in a certificate

course and are placed in the field at the grass roots level. Almost every location in Kenya and many of the sublocations have a PHT. One of the major responsibilities of the PHTs over the years has been the inspection of meat. Their curricula have not been adapted to respond to the major environmental causes of disease.

A large field based research project is currently being implemented in Kisumu. The CDC (Center for Disease Control in Atlanta, Georgia) and KEMRI are two of the of the major agencies involved. The project is comparing various treatment and prevention regimens for both clinical and cost effectiveness. Its findings need to be incorporated into basic health policy and training.

3.6.2 Diarrhea

The strategies for the prevention and treatment of diarrhea are also well known. Prevention includes the provision of clean water and sanitation, and treatment includes proper hydration, nutrition, and occasionally, drugs. Community and household education includes basic hygiene, proper storage of water and food, and appropriate treatment. The better the sanitation and hygiene the fewer drugs are needed.

Kenya has made some advances in the battle against diarrhea. More children now receive proper treatment in the home and in the clinic when they get diarrhea. The 1989 DHS found that only 21 percent of children were being properly treated, while the 1993 DHS found that 32 percent received appropriate treatment. This change from one in every five children to one in every three in only four years is impressive.

While treatment has improved, prevention has not. The national prevalence was 13 percent during the 1989 DHS and 14 percent during the 1993 DHS. More needs to be done to improve sanitation and hygiene in order to reduce the number of cases of diarrhea.

JICA supported KEMRI in testing cereal-based oral rehydration fluids. Cereal-based fluids are easier for the parents to mix, and contain cereals commonly available in the home. Many research studies have shown that cereal-based fluids are superior to ORS packets. The results of the KEMRI/JICA study showed that this is also true in Kenya. Unfortunately, these research results have not been integrated into the training of health professionals.

3.6.3 Pneumonia

As with malaria and diarrhea, the prevention of morbidity and mortality from pneumonia and other Acute Respiratory Infections (ARI) requires improvements in prevention and treatment. Comparisons of rates of acute respiratory infections and pneumonia in developed and developing countries reveal that "colds" are common everywhere, and are more prevalent in colder climates. However, pneumonia is much more prevalent in developing countries, and risk patterns follow

those of other causes of morbidity and mortality: low maternal education, crowded living conditions, large families and closely spaced births.

Treatment can be improved by assuring that appropriate antibiotics are available in health centers and dispensaries. A greater understanding of the epidemiology of ARJ in Kenya would also improve treatment, i.e. understanding of the proportion of "colds" which become pneumonia, the factors which lead to this transition, the pathogens which are producing pneumonia, and the most effective and inexpensive treatment(s) would be of great assistance. KEMRI has proposed studying this with JICA's assistance. This research findings could be incorporated into the training of health professionals and integrated into MOH policy.

3.7 Strategic Implications

- 1. Address the leading causes of morbidity and mortality through a basic health services approach that includes effective curative care and a mix of facility and community-based preventive programs. This approach is consistent with the strategy recommended in Kenya's Health Policy Framework (MOH 1994a).**
- 2. Strengthen community health education and environmental interventions that address the causes of disease (e.g., vector control). This includes IEC campaigns and other communication strategies that provide information on how to treat and prevent malaria and diarrhea and the importance of having children vaccinated. Pharmacists, pharmaceutical technologists and those who sell drugs at commercial outlets should be targeted for special educational programs.**
- 3. Appropriate drugs must be made available in the dispensaries and health centers for the early treatment of the most diseases. Health professionals also need additional training in the appropriate administration of essential drugs.**
- 4. Reform the basic, pre-service educational programs of health professionals to ensure they have adequate knowledge and skills to manage/prevent the major diseases. Continuing education courses focused on the major diseases need to be designed and made available to practicing health professionals.**
- 5. Strengthen data collection and analysis. Accurate and reliable data are needed in the government and private sectors in order to measure the impact of strategies and investments targeted to reducing the burden of disease.**
- 6. Target assistance to Nyanza and Western provinces which have the highest under 5 mortality rates in the country. Under 5 mortality could be most effectively reduced with a comprehensive campaign against malaria in these provinces. Strategies to reduce the incidence of morbidity and mortality could be tested in them, and later applied to other regions of the country.**

Chapter 4

HIV, AIDS and Sexually Transmitted Diseases

4.1 Background

The analysis in Chapter 3 illustrates that while the primary causes of disease in Kenya have not changed considerably in the past ten years, the chances of mortality from these common diseases may be increasing. However, with the onset of HIV/AIDS, the future may be even more grim. AIDS related illnesses will combine with the current major causes of morbidity and mortality and cause even greater harm to the population. The details of this epidemic will be discussed in this chapter.

From retrospective studies, it is known that HIV/AIDS existed in Kenya several years before the first AIDS case was diagnosed in 1984. In 1985, the GOK established the National AIDS Committee (NAC). By 1987, AIDS was added to the list of reportable diseases, and WHO was invited to provide technical assistance to the Government of Kenya in dealing with the epidemic.

Progress in attacking the ever growing problem moved forward in 1987. First the National AIDS Control Programme (NACP) was established. It worked with WHO to draw up the first five year (1987-91) Medium Term Plan, which focused on public awareness, standards for testing and counselling, strengthening surveillance, laboratory services, and training for care of patients; the latter in large part to protect health staff from infection.

High level policy statements in the GOK have supported these efforts; for example, the Seventh National Development Plan (1994-96) devotes a chapter to HIV/AIDS AND DEVELOPMENT, while at a more decentralized level, District Development Plans must report on the spread and impact of HIV/AIDS.

The primary responsibility of diagnosing and treating HIV/AIDS patients has fallen on the MOH where the fiscal burden of this ever-growing problem has resulted in a sharp decline in the quality of other urgently needed health services. A recent study predicts that all of Kenya's successes in health, particularly children's health may plateau or reverse before the end of this century. The full implications cannot be predicted but one scenario foresees an increase in Child Mortality Rate (CMR) from the projected rate of 119 to 137-152 by 1995. Such a drastic increase in this key health indicator threatens to reverse three decades of hard-won progress.

In August 1993 President Moi called for a concerted plan of action for HIV/AIDS. By March of the following year, the position of The National AIDS

renamed the National AIDS and STD Control Program and placed under the Ministry of Planning. Despite these changes, NASCP's ability to design and implement policies and coordinate activities continues to be hampered by a lack of operating funds as well as a lack of authority over other GOK ministries.

In addition to the public sector, NGOs and the private sector have sought to alleviate the suffering and spread of the epidemic. Indeed some NGO mission hospitals have a 40 to 50 percent bed fill-rate with HIV/AIDS patients. NGO efforts were formalized in 1990 with the formation of the NGO AIDS Consortium, which has served as a conduit for some MOH funds. Most international donors, however, have decided to support individual NGOs directly.

Some parastatals and private sector businesses have initiated workplace programs highlighting the importance of HIV/AIDS prevention and control to protect employees and their families from infection. Workplace interventions have the advantage of reaching people who engage in high-risk sexual behavior as well as people with partners who engage in high-risk sexual behavior. Peer education programs can be designed to target men and women together to help them work on difficult issues such as perception of self risk, empowerment and the use of condoms.

4.2 1994 Sentinel Surveillance Results

Kenya's sentinel surveillance system operates in thirteen antenatal sites throughout the country. Each year approximately 200-300 pregnant women are tested for HIV in each site. The results of the tests are reported to the National AIDS and STD Control Program.

As reported by the NASCP, there have been 52,000 cases of AIDS reported to the MOH since the beginning of the AIDS epidemic in Kenya through October 25, 1994. Cases have been reported from every district in Kenya. These reported AIDS cases represent the most visible part of the epidemic. The true number of AIDS cases in Kenya is estimated to number well over 150,000. Using the sentinel surveillance data and adjusting it to be representative for the total population, the NASCP has estimated that there are over 760,000 people who are HIV+ in Kenya.

4.2.1 Regional Variations

As reported in "AIDS In Kenya", sentinel surveillance results for 1993 indicate that approximately 20 to 30 percent of pregnant women in Busia, Kisumu and Nakuru are HIV+ while in Mombasa and Nairobi, 10 to 20 percent of pregnant women tested are infected. HIV prevalence among pregnant women in Kitale, Kakamega and Nyeri is between 5 and 10 percent. In Kisii, Kitui, Meru and Garissa, infection rates among

pregnant women are 2 to 10 percent. Overall, the HIV prevalence rate in the urban areas of Kenya is estimated to be 11 to 12 percent while in the rural areas the prevalence rate is approximately 4 to 5 percent. The adult HIV prevalence rate for Kenya is estimated to be 5.7 percent.

4.3 HIV and Tuberculosis

The MOH suspects that close to half of all Kenyans carry a latent Tuberculosis (TB) infection which is suppressed by their healthy immune systems. In the absence of HIV, about 0.2 percent of the population would develop new TB infections each year (30,000 to 50,000 cases per year). Among people with both HIV and latent TB, approximately eight percent will develop TB each year. This would mean an additional 90,000 new cases each year--if none of these cases transmitted the disease to others. However, TB is easily passed from one person to another by casual contact. The 90,000 additional cases will pass TB to others, and the TB will be more likely to be resistant to the drugs that are currently being used.

4.4 HIV and Other Sexually Transmitted Diseases

People infected with HIV and other STDs will usually have more severe STD symptoms and a higher rate of HIV infectivity. The STD will also probably be less responsive to conventional treatment.

It is difficult to know the incidence of STDs in Kenya. In various studies around the country, the majority of people who have admitted to having had an STD prefer to be treated by a private doctor or pharmacist. For those who do visit a government clinic, the MOH HIS does not record them separately. Genital ulcers are combined with diseases of the skin while genital and urethral discharges are often classified as Urinary Tract Infections.

Some special studies have attempted to collect prevalence data for small populations. Depending upon the population studied, prevalence rates for gonorrhoea have varied between 2.9 and 53.6 percent while prevalence rates for syphilis vary from 3.8 to 8 percent.

4.5 Knowledge and Practice

Information from the 1993 Kenya Demographic Health Survey (KDHS) illustrates the fact that both men and women have knowledge of AIDS. The high level of knowledge is found regardless of age, urban-rural residence, education level and province of residence. Ninety-six percent of men and ninety percent of women know that the AIDS virus is

transmitted through sexual intercourse, while only 5 percent of men and 7 percent of women know that a baby could become infected in the uterus or during delivery.

Information about basic transmission modes and prevention strategies is disseminated through the NASCP and the NCPD. The 1993 KDHS reports that nearly 88 percent of male respondents and 67 percent of female respondents had heard about AIDS on the radio. Fifty-seven percent of women and 39 percent of men had heard about AIDS from a friend or relative. Other sources of information included the newspaper and booklets. Fifteen percent of women and men had heard about AIDS from a health care worker.

Misconceptions regarding the transmission of HIV is alarming. Over half of the respondents believe that a person can contract HIV from mosquito bites, while one-third of the respondents mentioned kissing as a mode of transmission. Handshaking was listed by nearly 15 percent of men and women, touching the dead and sharing eating utensils and clothes were mentioned by a quarter of the respondents.

The KDHS also asked a question about the prevention of HIV/AIDS. While 86 percent of men recognized that there is a possibility of protection against HIV/AIDS, only 79 percent of women stated that one could be protected from HIV/AIDS. Abstinence was listed by 10 percent of men and 18 percent of women, while limiting the number of sexual partners was cited by 75 percent of men and 70 percent of women. Thirty five percent of men and 21 percent of women listed using condoms as a means of protection. However, a larger proportion of urban men and women than rural respondents listed condoms as a means of protection.

Further to this question regarding prevention, the KDHS also explored numbers of sexual partners and condom use in the six months prior to the survey. Survey results indicate that men report having more sexual partners in the six months prior to the survey than women. While 30 percent of women were abstinent during this time period, only 9 percent of men were. However, 32 percent of men reported having had two or more sexual partners during the specified time period as compared to 4 percent of women. The largest differences between men and women occur among the unmarried. Two-thirds of women reported abstinence in the six months preceding the survey while only 20 percent of men reported abstinence for this time period.

Men and women who reported having sex six months prior to the survey were also asked if they had used a condom with any of their partners. Twenty percent of men reported condom use while only 6 percent of women had used a condom. Among those respondents who reported having had three or more partners in the time period, 41 percent of men and 25 percent of women stated they had used a condom with at least one of their partners. Use of condoms is generally higher among the unmarried than those who are married.

4.6 The Socioeconomic Impact of AIDS

HIV/AIDS is likely to become Kenya's most serious health problem in terms of morbidity, mortality and cost. There are a growing number of areas where the incidence of HIV/AIDS is increasing rapidly and all of the 52 Districts and 7 Municipalities have reported cases. An estimated 20 to 40 percent of babies born of HIV positive mothers develop AIDS. In terms of age concentration; however, most AIDS cases are found in the 25 to 29 year age group for females and the 30 to 34 year age group for men.

The number of children who have been or will be orphaned (under age 15 and without a mother) can not be stated precisely; however, it is currently estimated that there are approximately 160,000 AIDS orphans. This number is expected to increase to 600,000 by the year 2000 and close to one million by the year 2005. The traditional system by which Kenyans have taken orphans into their extended families cannot cope with the magnitude of these numbers. Moreover, AIDS orphans will not receive the same level of nutrition, education or parental support as their more fortunate peers.

In addition to the impact of AIDS on children and orphans, life expectancy is expected to decline from 59 to 43 years for males and from 62 to 44 years for females by the year 2000. Currently, more males are diagnosed for HIV/AIDS than females. Unless drastic measures are taken to increase the effectiveness of AIDS prevention/control programs, Kenya may be facing a future as bleak as Uganda's current situation, where life expectancy is now the lowest in the world at 37 years and is expected to fall to 31 years before the epidemic plateaus.

Because all of the sentinel surveillance sites in Kenya are in urban or peri-urban areas, there are no national estimates of rural HIV prevalence. Based on the epidemic's spread in neighboring countries, rural HIV seroprevalence in Kenya is estimated to be slightly more than one half the urban rate of 11 to 12 percent. Adult HIV prevalence in Kenya has increased nationally from 3.5 in 1990 to 5.7 in 1993. The number of years from HIV infection to full-blown AIDS in adults is approximately 7 to 8 in Kenya; although, other sources have estimated the number to be as low as five years.

HIV positive persons will suffer numerous episodes of morbidity before they develop full-blown AIDS. Judging from studies in Tanzania, there may be 17 morbidity visits to health facilities for each patient. HIV morbidity may account for an increase of 170 to 340 percent over baseline adult morbidity rates and result in 45 percent of the Tanzanian MOH recurrent budget spent on treatment of HIV/AIDS patients. There is nothing which suggests that the pattern will be different in Kenya. Some hospitals in Kenya already report that they can not accept any more AIDS in-patients. Furthermore the opportunity cost of not treating other patients is a significant problem, as is the reduced level of quality of care in all MOH services because scarce resources are being devoted to AIDS.

The burden of treating people with AIDS in Kenya's hospitals could easily surpass the capacity of those facilities to provide adequate treatment, unless a shift to community-based care is planned and institutionalized as soon as possible. Estimates from August 1993 indicate that people with HIV infection occupied 40 percent of all hospital beds and consumed between 10 and 34 percent of the MOH's recurrent expenditures. The number of new AIDS cases is expected to triple in the low scenario, and reach six times current levels in the high scenario. Based on this information, it appears that without substantial investment in AIDS prevention and alternative treatment facilities Kenya's health care system could become seriously overburdened, leading to a decline in the quality of health care.

In addition to the direct cost of medical care for HIV/AIDS patients, the indirect cost to the GOK, to society in general and to the families of AIDS victims is the loss of income due to the morbidity/mortality of a large number of citizens in their prime earning years. Without AIDS, 100,000 young adults (ages 15 to 49) would have died in Kenya of other causes by 2005. With AIDS, that number can be expected to increase to 280,000. On average, each of the AIDS deaths will result in the loss of 22 years of productive life. By 2000, the Ministry of Planning projects that the direct and indirect cost of AIDS will have increased to 15 percent of GDP, from 3 percent of GDP in 1991. For the MOH, the cost of caring for HIV/AIDS patients alone in the year 2000 could equal the entire recurrent budget of 1993-94.

In addition to AIDS-related loss of skilled personnel in the health field, other essential sectors of the economy of Kenya will be adversely affected by the loss of skilled labor, particularly mining, transportation and manufacturing. In terms of coping with AIDS, it is expected that the greatest difficulties in replacing workers could occur in community/social/personal services, finance/insurance/real estate, and electricity/water due to the high skill levels of workers in these sectors. In addition, farms could face seasonal labor shortages as rural prevalence rates rise.

As stated in An Assessment of the Economic Impact of AIDS in Kenya, (FHI 1993) the burden of AIDS on the health and economic well-being of Kenya is likely to be devastating throughout this decade, in terms of illness, hospital costs and the loss of labor from Kenya's most productive age groups.

4.7 Strategic Implications for the Prevention and Control of HIV/AIDS/STDs

The scope of the problem precludes the Government or any one donor from solving it, although cooperation/coordination of the public/NGO/private sectors in addition to the donors is absolutely essential. Following is a list of possible key components for a national HIV/AIDS prevention and control program. Certain program elements such as the design and implementation of HIV/AIDS testing and counselling do not include a discussion regarding key inputs. Feasibility of certain elements will need to be discussed

more thoroughly; it is not within the scope of this assessment to examine the myriad of possibilities and constraints for each idea listed.

1. **Strengthen and enhance the role of the NASCP to include:**
 - effective coordination, and monitoring and evaluation, of prevention and control programs, as well as research;
 - the dissemination of information to other ministries and government bodies and effective policy development.
2. **Enhance existing NASCP HIV sentinel surveillance particularly in the rural areas. Include financing for test kits and supervision.**
3. **Develop a nationally-focused STD surveillance system.**
4. **Enhance existing IEC efforts, particularly among men and women in the rural areas. Focus on the development of IEC targeting the reduction of high-risk behavior, the empowerment of women to negotiate condom use, and male acceptance of condom use.**
5. **The prevention and control of STDs such as syphilis and gonorrhea with specific focus on private practitioners and pharmacists as a common point of entry for diagnosis and treatment.**
6. **Increase condom availability and accessibility through the public and private sectors. Develop sustainable systems for the procurement and logistics of condom distribution.**
7. **Activate institutions of higher learning and religious organizations to develop guidelines and policy for the dissemination of information and their participation in prevention and control activities.**
8. **Increase health workers' knowledge regarding the prevention and control of HIV/AIDS: integrate HIV/AIDS/STD training into existing curricula for medical practitioners.**
9. **Develop and implement HIV/AIDS testing and counselling service delivery points.**
10. **Integrate HIV/AIDS/STD services into existing family planning service delivery points.**

Chapter 5

Family Planning and Reproductive Health

5.1 Background

At the time of Kenyan independence in 1963, the GOK and other influential leaders recognized the relationship between national economic development and the need to promote improvements in education and health. During this time leaders also recognized that the increasingly rapid rate of population growth was making it extremely difficult to save the capital necessary to both invest in the modernization of the economy and in human resource development. In 1967 official policy action highlighted the need for the GOK to take action to reduce population growth.

During the 1970s the GOK and donors, particularly the Nordic countries and USAID, prepared the facilities and trained staff to provide family planning information and services. The seventies were a low period in family planning. With declines in mortality rates and little immediate acceptance of family planning, the Total Fertility Rate (TFR) in 1970 actually increased to over 8, the second highest in sub-Saharan Africa and one of the highest in the world. However, by the mid-1980s positive trends in Contraceptive Prevalence Rate (CPR) growth were discernable. This change, in part, reflects the results of steady increases in Kenya's commitment to education, including the education of girls.

Increased use of contraceptives has resulted in a one-third decline in fertility in the past 15 years. Fertility has declined from 8.1 births per woman in the mid-1970s to 5.4 births for the period 1990-1992. The decline has accelerated recently with fertility dropping by 20 percent between the time periods of 1984-1988 and 1990-1992. This is the most dramatic drop in fertility ever recorded in Kenya and one of the most dramatic recorded throughout the world.

Urban declines in TFR have also been rapid with a drop of two fewer children per women during this same period. Currently, urban TFR is 3.4 whereas rural TFR is 5.8. Fortunately, this decline in TFR is across educational levels, with the biggest decline being among primary school graduates, whose TFR fell from 6.5 in 1988 to a current level of five.

In summary, as a result of significant social, cultural and economic transformations, Kenya can be classified as one of the most successful family planning programs in sub-Saharan Africa.

5.2 Regional Level

As reported in the 1993 Kenya Demographic Health Survey (KDHS), Western, Rift Valley, Nyanza and Eastern Provinces have fertility rates that are above the national

average. Nairobi and Central Province depict the lowest current fertility levels. The total fertility rate in Western Province (6.4) is almost twice the rate in Nairobi (3.4).

Although all provinces have shown some level of decrease in fertility levels, some have changed more dramatically than others. Central Province shows the largest decline in fertility from a total fertility rate of 6.0 to 3.9 or a 35 percent decline. Major declines have also occurred in Western and Nairobi Provinces with total fertility rates decreasing over 20 percent. Nyanza Province has shown an 18 percent decline in the fertility rate while Coast Province shows a decline of 4 percent.

Despite the fact that Western Province has experienced a major decline in fertility levels, Western has the highest fertility rate in the country, followed by Eastern and Nyanza.

5.3 Current Use of Contraception

Results from the 1993 KDHS indicate that 33 percent of married women are currently using a contraceptive method whether modern or traditional. Twenty-seven percent of women are using modern methods while six percent are using traditional methods. Modern methods, therefore, account for 83 percent of overall contraceptive use.

The most widely used contraceptive method is the pill at 10 percent. Seven percent of women use injectibles while 6 percent of women have been sterilized. Four percent of women use the IUD and 4 percent use the rhythm method. Less than one percent of married women use other methods such as condoms, vaginal methods, Norplant, natural family planning and withdrawal. Other traditional methods, abstinence, herbs and breastfeeding, are used by less than one percent of married women.

There are significant differences in levels of contraceptive use by province. Central Province has the highest level of current use at 56 percent, followed by Nairobi at 45 percent and Eastern Province with 38 percent of married women using a contraceptive method. Other provinces display a contraceptive prevalence rate lower than the national average. Coast Province has the lowest percentage of current modern contraceptive use, followed by Nyanza and Western Provinces.

The pill is the most commonly used method in Nairobi, Central, Coast and Eastern provinces while injection is the major method in the three western provinces -- Rift Valley, Western and Nyanza. Of particular interest is the fact that approximately 8 percent of married women in Central Province have been sterilized, followed by 7 percent of married women in Nyanza Province.

- As indicated in the 1993 KDHS, the largest differentials in current use of contraception are found for educational groups. Contraceptive use increases steadily with increasing level of education, from 20 percent of married women with no education to 52 percent of those with secondary education. The proportion of users who are using modern methods also increases with increasing level of education. Among women with no

or cultural taboos. At other times, abortion may be pursued when a woman (or couple) has had the desired number of children. An unwanted pregnancy may also result from the failure of contraception. Undoubtedly, in many cases there is more than one reason for a woman to choose to abort her pregnancy.

Most women who terminate their pregnancies do not use regular and effective contraception. Rogo estimated that only 7 percent of women were using some form of contraception at the time of conception of the index pregnancy. The primary methods used were oral contraceptives and "safe days." A study at KNH by Sjostrand, et.al. (1993) found that while up to 82 percent of women admitted with incomplete abortion knew about contraceptives, up to 62 percent had never used any method. Of those who had ever used contraceptives, 27 percent had discontinued due to unavailability of contraceptives and 63 percent discontinued due to side effects. However, ninety percent of women in this particular sample expressed interest in contraception after the index abortion.

There is a great deal of discussion and concern regarding sexuality among adolescents in Kenya. Research shows that more young people are becoming sexually active, at early ages, at a high frequency, with many partners, and without the benefit of effective and/or regular contraception. One of the main outcomes of these encounters is unwanted and unplanned pregnancy. In fact, a recent study by Okumu and Chege (1994), found that among 14 schools, 7 percent of sexually active female respondents had been pregnant and 42 percent aborted their pregnancy. Although the age range of women in Kenya aborting is wide (from 14 to 52 years), most studies contend that the majority of women aborting are between the ages of 20 and 25 years.

The prevalence of septic abortion varies among studies. However, studies agree that single, young women are more likely to have septic abortions. Sepsis is one of the most common causes of infertility in Kenya and may also be responsible for the high rate of ectopic pregnancies. Adolescents, in particular, often delay seeking medical attention. By the time they are brought to hospital they have advanced abortion-related complications. In fact, Kigonda (1986) reported that of the deaths at the KNH due to abortion, 67.4 percent were of women aged 25 years or less and that 24.2 percent were less than 20 years. Another report indicates that 84.4 percent of septic abortion cases were among females aged 25 years or less (Aggarwal and Mati, 1985).

If abortion is the strongest expression of unmet need, what are the openly expressed numbers of unmet demand from the KDHS of 1993 and how different are these from the previous survey in 1989? In reviewing KDHS survey numbers, it is essential to remember that they are an undercount in that they do not include widows, divorcees, or unmarried women, many of whom are sexually active. Among women under 19 years, 84 per cent are unmarried and therefore not included in the KDHS findings. More seriously, these unmarried women cannot by law receive family planning services. Older single, divorced or widowed women can sometimes access services, but the under nineteens are refused at many service delivery points.

5.5 Fertility Behavior and Child Survival

The effects of high risk births on mothers and children are well documented world-wide. A recent analysis of 1993 KDHS data indicates that common high-risk fertility behaviors such as young maternal age may account for an estimated five percent of under-five deaths. Taken together, high-risk fertility behaviors account for an estimated 14 percent of all under-five deaths. At present 61 percent of future births in Kenya, can be classified as high risk because of the mother's age, high parity or too short birth interval. The latter condition which is common in several parts of Kenya, is particularly dangerous for children born less than 24 months after the preceding births. These short-birth interval babies have a 50 percent greater chance of dying than babies born 36 or more months apart. Thus, increasing birth intervals to 24 months or more could have a significant impact on reducing under-five mortality.

As evidenced from 1993 KDHS results, an infant is four times as likely to be born after an interval as short as 7 to 17 months if the preceding birth died than if the preceding birth lived. Analysis of the 1989 KDHS results show that these differences in birth intervals are in part determined by replacement and insurance effects, i.e. couples are seeking either to directly replace a child lost or purposefully bear more children than ultimately desired based on the experience of child mortality in the community. These patterns reflect the early resumption of sexual intercourse, shorter duration of breastfeeding and minimal use of contraceptives (USAID 1994).

Among all provinces Nyanza and Western provinces have the lowest median number of months since the previous birth (29.4 and 28.7 respectively). Nyanza, Eastern and Western Provinces have the highest percentage of females 15 to 19 years of age who are mothers. The percentage of females in Nyanza Province 15 to 19 years of age who are pregnant with their first child is nearly twice the percentage in Nairobi Province (6.4% as compared to 3.4%). Western Province has the second highest percentage (4.1%) of females 15 to 19 who are pregnant with their first child.

Nyanza and Western provinces also have the highest mortality rates for children under five in the country. The Table below compares the various mortality rates.

PROVINCE	Neonatal (Birth to 1 mo.)	Post-Neonatal (2 mo to 11 mo)	INFANT (0 to 11 mo)	USMR (0 - 5 year)
Nyanza	39	89	128	187
Western	27	37	64	110
NATIONAL	27	36	63	93

Essentially, a child born in Nyanza is two times more likely to die than the average child in Kenya, and over four times more likely to die than a child born in Central Province.

5.5.1 Availability of Maternal and Child Health Services

The Service Availability Questionnaire of the 1993 KDHS provides valuable insight into the availability of general health services. Data from this questionnaire indicate that half of women in Kenya live within 5 kilometers of a facility that offers antenatal services. Forty-three percent of women live within 5 kilometers of a health center or dispensary with antenatal services while only 12 percent live within 5 kilometers of a hospital offering these services. Women in Nairobi are closer to antenatal services than women in other provinces. More than two-thirds of Kenyan women live within one hour travel time to antenatal services whereas 38 percent live within 30 minutes travel time to antenatal services.

With respect to delivery care, 32 percent of currently married women live within 5 kilometers of a facility--hospitals, health centers and dispensaries--that offers this care. Twenty-two percent live within 5 kilometers of a health center that provides delivery care while 12 percent live within 5 kilometers of a hospital providing delivery assistance.

With respect to travel time, 35 percent of women have a health center with delivery care and 43 percent have a hospital with delivery care within one hour of travel time. Of particular importance, is the fact that nearly one-third of women live in communities where the health center/dispensary does not provide delivery care.

Nyanza and Western provinces have the largest proportion of women delivering without assistance -- at 16.5 and 19 percent of all births, this percentage is two to three times greater than in any other province. Yet, over 50 percent of women in Nyanza Province live within 9 kilometers of a health center with delivery care, and nearly 90 percent of women in Western Province live within 9 kilometers of a health center offering these services. The majority of women in both provinces live within one hour travel time to facilities offering delivery services.

PROVINCE	Home Deliveries (%)	Assisted by Trained TBA (%)	Assisted by Untrained (%)	Alone (%)
Nyanza	61	27	34	17
Western	66	29	25	19
NATIONAL	55	33	35	10

While this information provides insight into accessibility to facilities, one must bear in mind that it does not offer insight as to the quality and utilization of services offered.

5.6 Family Planning Service Delivery

The realities of meeting the increasing demand for family planning services must be examined in light of the strengths and weaknesses of the national family planning service delivery program in Kenya.

The British ODA report of March 1994 offers a succinct summary of service delivery constraints:

Although steady efforts have been made to provide family planning services through the public, NGO, and private sectors, significant unmet need remains: indeed it has out-stripped current capacity for service provision. This is in part because of remaining constraints on information and services. There are official constraints, the MOST important of which is the prohibition of contraception to unmarried, even those who have already had a baby. In addition to official constraints, which adversely affect the public, NGO and private sector, there are social and traditional constraints. These constraints, combined with local and national stock-outs of some contraceptives are a major part of the high rate of unmet need in Kenya. This demand for services cuts across all socio-economic groupings as well as the urban/rural divide. Quality and Quantity of services need improvement throughout the system with particular emphasis on the needs of single parents, slum dwellers and youths. Innovative strategies need to overcome the constraints that prevent women from accessing available services.

5.6.1 Service Availability

The Service Availability Questionnaire of the 1993 KDHS provides a picture of the family planning and health service environment available to Kenyan women. There are two types of mechanisms for providing services: outreach programs and stationary facilities.

Half of currently married women live within 5 kilometers of a health facility that provides family planning services. Forty-five percent of women live within 5 kilometers of a health center or dispensary offering family planning services while only 11 percent live within 5 kilometers of a hospital offering these services.

While 92 percent of women living in Nairobi are within 5 kilometers of a family planning service delivery point (SDP), only one-third of women in Rift Valley Province live within 5 kilometers of a SDP.

With respect to travel time, approximately 60 percent of Kenyan women live within one hour's travel time to a source of family planning; 37 percent live within 30 minutes of an outlet. The 1993 KDHS also interviewed both women who are currently using a modern contraceptive method and women who are not to determine travel time to and from a

supply source. Differences between the travel times reported by users and nonusers are not significant. This suggests that travel time to services is not a major barrier to contraceptive use among Kenyan women.

Here again, this information does not provide insight as to the quality and utilization of family planning services being offered.

5.6.2 Source of Supply

Information from respondents in the KDHS reveal that two thirds of women who use modern methods (68%) obtain their methods from public/government sources, while 25 percent rely on private medical sources and 2 percent use other sources, such as shops and friends. Government hospitals are the most frequently cited source, serving 30 percent of users followed by government health centers (25 percent) and government dispensaries (14 percent). Private hospitals, clinics and mission facilities each serve 8 percent of current users.

Nearly 75 percent of pill users obtain their methods from government health centers and hospitals; six percent obtain supplies from community-based distributors. Injections are also supplied mainly through government sources with nearly 25 percent supplied through the private sector. Over 60 percent of female sterilizations and IUD insertions occur at government facilities, with one third occurring in private medical facilities. Condom users rely heavily on government facilities; however, a large number of women also collect condoms from private sources such as pharmacies, friends and shops.

5.6.3 Community-Based Distribution

The Kenyan family planning program has placed special emphasis on establishing a network of community-based distributors (CBDs). CBDs operate under the auspices of a number of government and nongovernmental organizations. They provide family planning information, motivation and, in many cases, supplies to the men and women in their catchment area. They are generally provided with training, supplies and, in some cases, a small stipend. Lewis, et.al. estimated in 1992 that there were over 10,000 CBD workers in 37 of the then 41 districts in Kenya.

1993 KDHS results indicate that CBD coverage may be quite low. Only one fifth of women said there was a CBD worker in their area and only 1 in 10 said she had been visited by a CBD worker in the past six months. Older women and those living in rural areas are more likely to know of a CBD worker in their area and to have been visited in the past six months. CBD workers are either more prevalent and/or better known to women in Western, Coast and Nyanza Provinces and are relatively unknown to women in Nairobi.

There are many possible explanations for these low numbers. While women may know CBD workers in their community they may not be aware of their role in the community. Generally, CBD workers target women who are at higher risk of a dangerous or unwanted pregnancy. Furthermore, they may avoid talking to women who are unmarried, menopausal, sterilized, using another method or unsupportive of family planning.

5.6.4 Source of Family Planning Information

The KDHS further reports on where women learn about family planning. Thirty one percent of respondents cited friends and relatives as the most common source of family planning information. However, more women said they received "the most information" from health workers and clinics. Thirteen percent of women cited the radio as their source of information. These three sources were listed by women regardless of their place of residence.

5.7 Attitudes Toward Family Planning

Nearly 75 percent of female respondents in the 1993 KDHS believe that family planning information should be available to young people; however, only half think that family planning services should be provided to youth. Women in the Coast Province and women with no formal education are the least likely to approve of family planning information or supplies being available to Kenyan youth. This same group of respondents are also less likely than other women to approve of the use of family planning in general.

Overall, 89 percent of married women who know a contraceptive method approve of family planning. Nearly two thirds of women indicated that their husbands approve of family planning; however, 13 percent of women who approve of family planning say that their husbands do not approve. Married women from Coast Province and those with no formal education are more likely than other married women not to know their husbands' attitudes towards family planning. The proportion of women who do not know their husbands' attitudes regarding family planning use is also high among women age 15 to 19 years old.

5.7.1 Male Attitudes Regarding Family Planning

Results from the Male Survey of the 1993 KDHS indicate that 90 percent of married men in Kenya approve of family planning use. According to the *men's perceptions*, in 75 percent of Kenyan couples, both the husband and wife approve of family planning while in only 4 percent of couples, both the man and the woman disapprove of family planning. Approval of family planning definitely varies with background characteristics. Older men and men from Coast and Rift Valley Provinces are less likely to approve of family

planning. Approval of contraceptive use increases with increasing education. Male thoughts regarding the ideal number of children at 3.8 are very close to the 3.7 children desired by women.

5.8 Strategic Implications for Family Planning and Reproductive Health

- 1. Improve access and availability of contraceptives through enhanced service delivery in the public sector to include commodities procurement and logistics management.**
- 2. Enhance and expand family planning service delivery in the private sector, with increased attention on the potential use of pharmacies as supply points for some contraceptives.**
- 3. Expand training of public and private family planning practitioners:**
 - a. to increase knowledge regarding contraceptive use and family planning service delivery;**
 - b. to increase managerial capacity of health care practitioners to offer high quality family planning services;**
 - c. to integrate information and service delivery for the prevention and control of HIV/AIDS/STD; and**
 - d. to integrate information regarding FP and access to FP service delivery (whether on-site or referral to services) for antenatal and postpartum women.**
- 4. Expand and enhance national IEC efforts:**
 - a. to increase public awareness regarding contraceptive use and supply sources;**
 - b. to educate men regarding the benefits of family planning and encourage male participation in and support for family planning.**
- 5. Advocacy with the GOK regarding access to information and family planning services for unmarried women and adolescents.**
- 6. Enhance the role of Community-Based Distributors to include information regarding child health, HIV/AIDS/STD prevention and control and as referral sources for long-term family planning methods.**

7. **Train health care practitioners working with women seeking pregnancy termination or presenting with complications due to incomplete abortions to offer post abortion family planning counseling and services.**
8. **Integrate FP service delivery into existing health centers offering child survival, antenatal and delivery services with specific emphasis on postpartum FP counselling.**
9. **Focus on high-risk provinces, such as Nyanza and Western, to improve fertility behavior, i.e. increased birth spacing, increased age at marriage and first pregnancy, thus impacting child survival.**
10. **Improve female access to education.**
11. **Enhance FP service delivery to marginalized, hard-to-reach populations, such as urban slum residents.**

Chapter 6

Health Sector Resources

This chapter describes the resources available in the public, NGO/Mission and private sectors. It covers the number and distribution of health facilities, beds and health personnel. It includes sections on the physical infrastructure, bed and health personnel. It also presents data on the Ministry of Health educational institutions -- the Medical Training College (MTC), the Rural Health Training Centers (RHTCs) and the Rural Health Demonstration Centers (RHDCs). The data are based on a field surveys and other research by Development Solutions for Africa, Ltd. during the past 24 months.

Data Sources and Quality

Accurate data on the key resources of the health sector -- facilities, beds and personnel -- is critical to all aspects of strategic and project planning. One of the major weaknesses of the MOH is that it has not been able to collect and maintain reliable data on essential health resources. Recent studies commissioned by the Ministry of Health (Schwarz 1995) revealed that:

- the number of health facilities were under estimated by 25-35 percent;
- data on health personnel (MOH, Treasury and payroll records) varied between 15 and 20 percent;
- there are major problems in the classification of personnel and health facilities.

Whereas the official statistics would suggest the need to increase health facilities and beds by the end of the century, a preliminary analysis of recent data indicate that they are more than adequate for the next seven to ten years. The following section presents data from DSA surveys carried out for the MOH in 1994. In the discussion of resource distribution among provinces data on Nyanza and Western Provinces are highlighted. These two provinces have the highest Under 5 Mortality Rates (USMR) and the lowest relative share of health personnel and facilities. They may require more assistance than other provinces, and are potential targets for JICA and USAID projects under the Joint Strategy Agreement.

6.1 Health Sector Organizations and Agencies: An Overview

There are three major categories of health service providers in Kenya: They are:

1. The Government (GOK), also referred to as the "public sector";
2. The Non-Governmental Organizations (NGOs, including religious missions);
3. The Private Sector which includes private health facilities and health professionals in private practice.

All providers, including those in private practice are supposed to operate according to laws passed by Parliament and follow policies and procedures established by the Ministry of Health. Within this framework, there are several administrative structures and organizational relationships that guide the delivery of health services.

The GOK is the dominant agency in the health sector. It has over 70 percent of the employees and owns almost 60 percent of the health sector infrastructure. Table 6.1 and Figure 6.1 show the distribution of resources among the GOK, NGO and private sectors.

Provider	Health Sector Infrastructure *		Beds and Cots		Health Sector Employees	
	Count	Percentage	Count	Percentage	Count	Percentage
GOK	2,120	58%	25,784	52%	55,195	70%
NGO	716	20%	11,325	23%	10,981	14%
PRIVATE	835	23%	12,164	25%	12,419	16%
Total:	3,671	100%	49,273	100%	78,595	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.1: Distribution of Health Sector Resources by Agency.

* Includes all health facilities (3,493), administrative offices, educational centers, medical stores etc.

The percentage of employees relative to the infrastructure is higher for the GOK than for the NGOs and private agencies. This is due to the fact that the GOK employs more than 12,000 workers in administration, public health and municipal cleansing services. The other agencies employ few public health professionals and have a smaller proportion of administrative personnel.

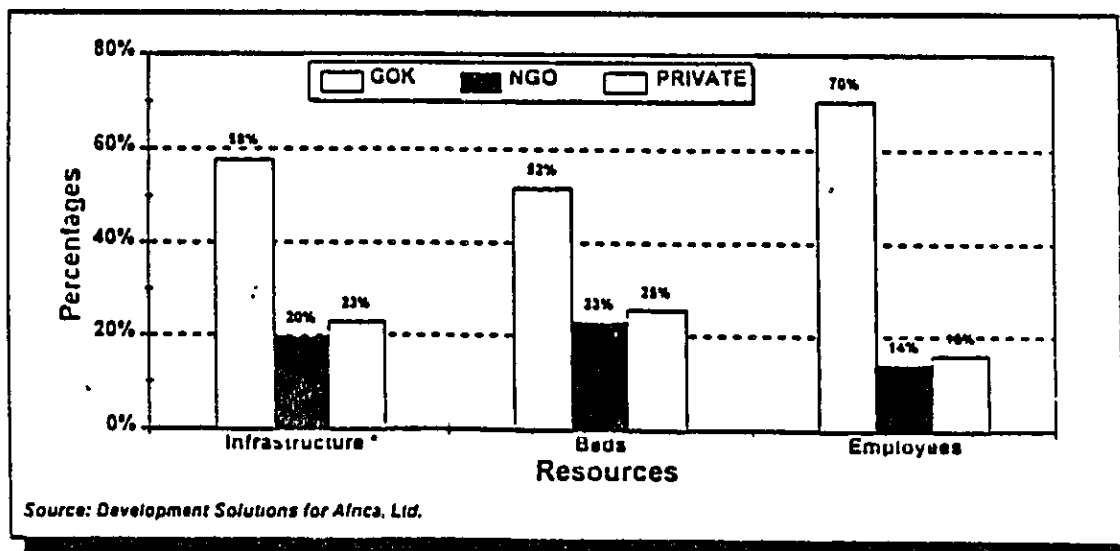


Figure 6.1: Distribution of Health Sector Resources by Agency.

6.1.1 Service Delivery Organizations and Agencies

6.1.1.1 The Government of Kenya

The GOK is the major provider of health services in the country. The GOK (the public sector) in this report is divided into three major categories:

- (1) The Ministry of Health (MOH);
- (2) The Ministry of Local Government (MOLG) which is the parent Ministry for major municipalities and;
- (3) Other Ministries and parastatals (including KNH).

6.1.1.1.1 The Ministry of Health

Most Government services are delivered by the Ministry of Health. They include curative care at inpatient and outpatient facilities, Maternal and Child Health activities, Family Planning services and specialized programs for immunization (KEPI), the Control of Diarrhoeal Disease (CDD), Vector Borne Diseases, nutrition, and others. Most facility-based preventive services (including MCH/FP) are organized through the Division of Family Health. The MOH also has a large Environmental Health program run by Public Health Officers and Technicians. Table 6.1.1.1 and Figure 6.1.1.1 show the percentage distribution of facilities, beds and personnel resources among the major government agencies.

The MOH manages 93 percent of all GOK facilities and almost 90 percent of the public sector beds. Approximately 78 percent of the government personnel in the health sector are MOH employees, and another 15 percent work for the Ministry of Local Government in the major urban municipalities.

Agency	Health Sector Infrastructure *		Beds and Cots		Health Sector Employees	
	Facilities	%	Beds	%	Employees	%
MOH	1,961	93%	22,936	89%	43,505	78%
MUNICIPALITIES (MOLG) †	118	6%	858	3%	9,105	15%
OTHER GOK (inc.KNH)	41	2%	1,990	8%	4,235	8%
Total:	2,120	100%	25,784	100%	55,845	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.1.1.1: Distribution of Health Sector Resources within the GOK.

† Approximately 80% of the municipal health employees are in administration and "cleaning" which includes the collection and disposal of garbage. Less than 20% of the MOLG health personnel deliver curative and MCH/FP SERVICES

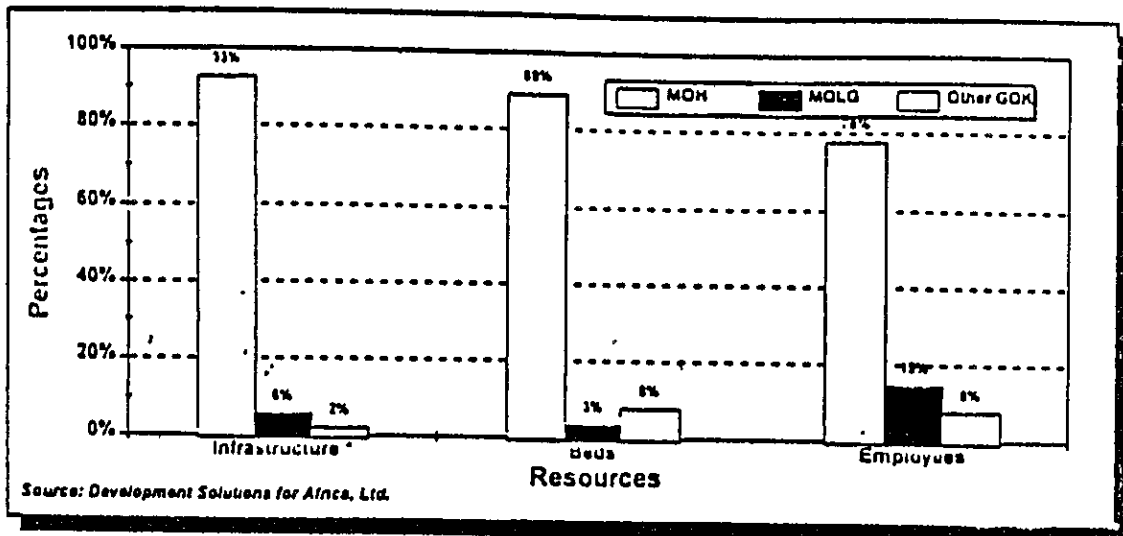


FIGURE 6.1.1.1: Distribution of Health Sector Resources within the GOK.

Outside Nairobi, the Ministry of Health is the major service provider in both the urban and rural areas. The Nairobi Provincial Medical Officer (PMO) has a more limited role in health service delivery to the general population. It does, however, operate specialized facilities such as Mathare Mental Hospital, the Kamiti Prison Hospital and the National Spinal Injury Hospital, and provides outpatient services at health centers and dispensaries attached to government institutions such as schools and airports. Most curative, MCH/FP and public health services in Nairobi are delivered by the Department of Public Health in the Nairobi City Council (NCC). The National STD/AIDS Control Program (NASCP) is also part of the Ministry of Health. It is a planning and coordination body with an IEC component.

6.1.1.1.2 Ministry of Local Government (MOLG)

The major municipalities in Kenya operate health facilities and deliver curative and MCH/FP services. They also provide public health, garbage collection and other cleansing services. The principal ones, directed by Medical Officers, are in Nairobi, Mombasa, Nakuru and Kisumu. They employ large numbers of health personnel. Other large municipalities such as Nyeri, Kakamega and Thika have small public health departments and employ few doctors, clinical officers and nurses.

Municipal Departments of Public Health are accountable to city councils. Their services are financed by the city revenues, funds from the Ministry of Local Government, and revenues from user charges. The MOH, through the District Medical Office (and the PMO in Nairobi) also operates health facilities in all urban areas and second professional staff to work in those operated by the municipal health authorities.

6.1.1.1.3 Other Ministries and parastatals

- (i) **The Kenyatta National Hospital (KNH).** KNH functions under parastatal authority and is controlled by a Board of Directors. It is the largest hospital in the country and serves as a national referral and research institution. It is also a major training institution for physicians, particularly in post-graduate specializations. Services are financed by revenues generated from user charges and a large subsidy from the Ministry of Health.
- (ii) **Other Ministry and Parastatal Clinics and Dispensaries.** These facilities are set up to provide basic health services for employees of ministries (e.g. Education) and parastatal companies. They may be directed by the parent organization or in coordination with MOH through the Provincial or District Medical Office. Services are financed by the Treasury and/or the parent ministry or parastatal. The MOH normally provides technical staff and drugs while the parastatal institution supplies the building space, administrative and subordinate staff.
- (iii) **The National Council for Population and Development (NCPD).** The NCPD is attached to the Ministry of Planning and National Development. It is organizationally divided into a Council Board, a Council and a Secretariat. Its major functions are policy formulation, planning, intersectoral coordination and IEC.

6.1.2 Non-Governmental Organizations and Religious Missions

Religious missions and other NGO's play an important role in the provision of basic health care in Kenya. They provide inpatient and outpatient curative care, and in many facilities offer a wide range of MCH/FP services. The NGOs run almost 20 percent of the health facilities in Kenya and employ about 14 percent of the health sector personnel. They operate under the authority and direction of their national or international organizations. Expatriate doctors and administrators play an important role in these agencies. Several NGOs also have licensed training programs for nurses and provide on-the-job training for clinical support personnel. Services are financed by a variety of mechanisms which include charitable donations and fee-for-service payments. Government support to NGOs has declined during the past decade, and there is some evidence to suggest that their level of services has decreased (MOH 1994:19).

6.1.3 The Private Sector

Private health facilities operate under the authority and direction of individual owners and/or boards of directors. They are involved primarily in curative care for inpatients and outpatients although some provide MCH/FP services. Private health care is financed on a fee-for-service basis and through linked businesses such as pharmacies. A major source of revenue for private institutions, practitioners and pharmacists is the reimbursement they receive from NHIF and private insurance schemes.

In recent years, there has been an expansion of private clinics, maternity homes and nursing homes. While many are officially sanctioned, there is an increasing number of unregistered clinics run by individuals who are not properly licensed (MOH, 1994:20). While the practice is illegal, many government health professionals engage in part time private practice to supplement their income. Approximately 23 percent of all health facilities and 16 percent of all health sector personnel are in the private sector.

Pharmacists, pharmaceutical technologists and traditional healers also provide health services in the private sector. Approximately 86 percent of all registered pharmacists are in this category along with almost two thirds of the pharmaceutical technologists.

6.2 Health Sector Infrastructure

The health sector infrastructure includes all health facilities, administrative offices in the districts and provinces, warehouses and the Medical Training Colleges. Health facilities (dispensaries, health centers, hospitals etc.) constitute approximately 95 percent of the health sector infrastructure. The remaining 5 percent of the health sector infrastructure are district and provincial medical offices (DMO, and PMO), MOH headquarters, warehouses, laboratories and the MTCs. Private pharmacies are not included in this total. Figure 6.2 and Table 6.2 summarize the data for the health sector infrastructure.

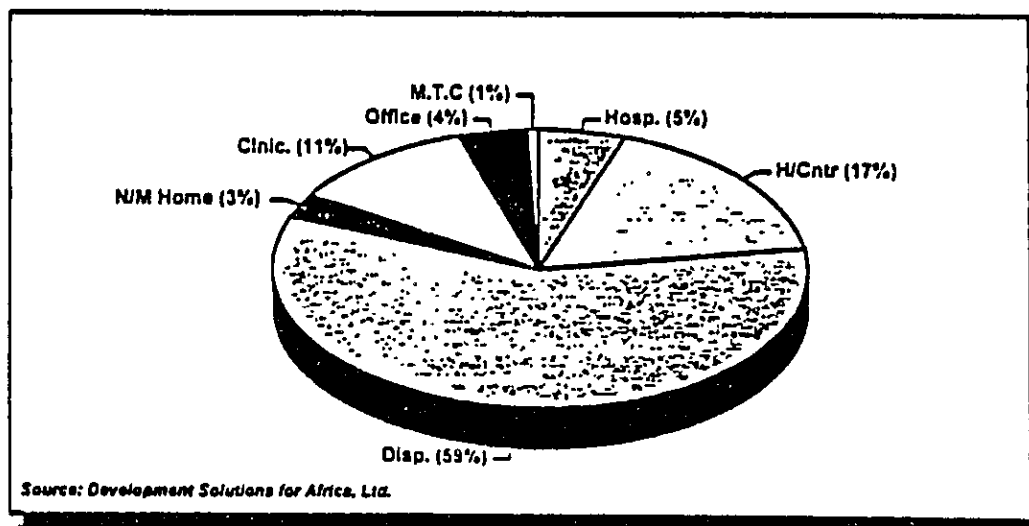


FIGURE 6.2: Health Sector Infrastructure.

Kenya's health sector infrastructure has approximately 3,500 facilities that deliver health services (the health facilities), plus over 150 offices and 24 Medical Training College centers. Dispensaries are the largest category (59%), followed by health centers (17%). Rural Health Training Centers (RHTCs), Rural Health Demonstration Centers (RHDCs) and Mobile Health Units are classified below as Health Centers. Privately owned and community pharmacies and stores that sell drugs are not included as part of the health infrastructure in this report. They do, however, play an important role in the supply of drugs with estimates in

the 22-42 percent range (DDM 1994:50). Private clinical laboratories and radiological laboratories are also excluded in the presentation that follows.

Facility Type	Health Sector Infrastructure	
Hospital	191	5%
Health Center **	631	17%
Dispensary	2,149	59%
Nursing & Maternity Homes	103	3%
Clinics & Medical Centers	419	11%
Offices	154	4%
M.T.C	24	1%
OTHERS		
Total:	3,671	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.2: Health sector Infrastructure.

** Health centers include RHDCs, RHTCs and MOBILE CLINICS.

The health infrastructure in Kenya has expanded rapidly since independence. There is now one health facility for every 7,100 residents (14 health facilities per 100,000 population). In a survey of MOH health facilities completed by Development Solutions for Africa, 43 percent reported having piped water and only 21 percent have electricity. Only 53 percent of the hospital and health centers are equipped with laboratories. Many facilities are in need of repair and essential equipment.

6.2.1 Urban-Rural Distribution

In relation to the distribution of the population in Kenya, most health facilities are reasonably distributed between urban and rural areas. There is, however, a slightly higher concentration in the urban settings among all provider agencies. This imbalance is due to the tendency to establish hospitals, nursing and maternity homes, and private health clinics in urban settings. Figure 6.2.1 shows the urban rural distribution of health facilities. Table 6.2.1 presents their distribution in relation to the population.

Setting	Health Facilities		
	Total	Percent	Per 100,000 population
Urban	820	23%	20
Rural	2,673	77%	13
Total:	3,493	100%	14

Source: Development Solutions for Africa, Ltd.

TABLE 6.2.1: Health Facilities by Urban/Rural Setting and Population.

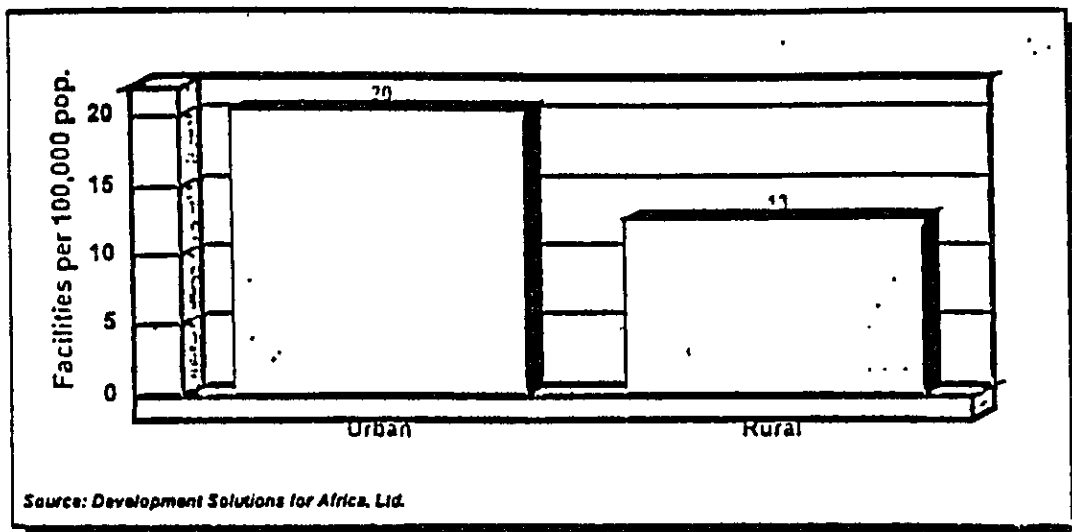


FIGURE 6.2.1: Facilities by Population and Urban/Rural Setting

6.2.2 Distribution by Type of Agency

The GOK operates 56 percent of the health facilities in Kenya. They manage over half the hospitals, more than three quarters of the health centers, and 62 percent of the dispensaries. The NGOs operate almost one third of the hospitals and more than 20 percent of the health centers and hospitals. The private sector operates 33 hospitals (17%), and almost 90 percent of the nursing and maternity homes. They also run almost 80 percent of the small facilities classified as health clinics and medical centers. Figure 6.2.2a and Table 6.2.2 show the distribution of facilities by agency.

Facility Type	GOK		NGO		PRIVATE		TOTAL	
	No.	%	No.	%	No.	%	No.	%
Hospital	97	51%	81	32%	33	17%	191	100%
Health Center	487	77%	108	17%	38	6%	631	100%
Dispensary	1,322	62%	489	23%	338	16%	2,149	100%
Nursing & Mat. Homes	6	6%	6	6%	91	88%	103	100%
Clinics & Med. Centers	45	11%	44	11%	330	79%	419	100%
Total:	1,957	56%	708	20%	830	24%	3,493	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.2.2: Health Facilities by Type of Sector.

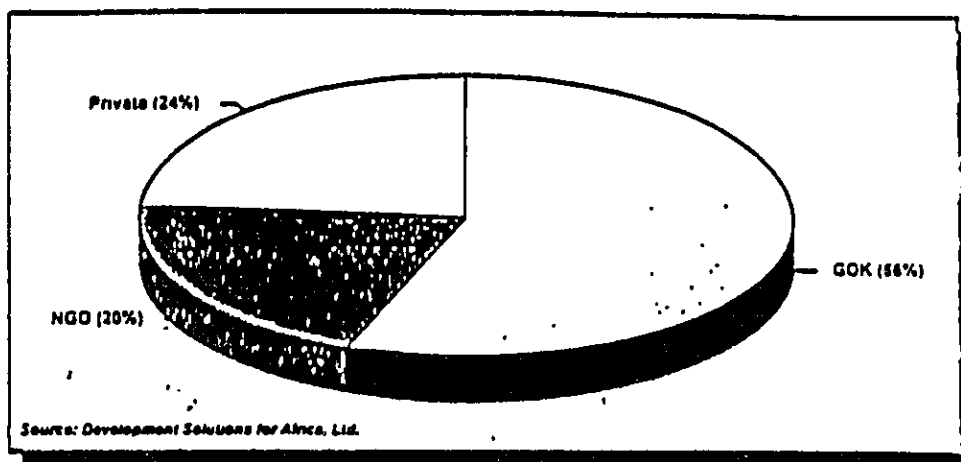


Figure 6.2.2: Health Facilities by Sector.

The GOK and NGOs have less than 20 percent of their health facilities in urban areas compared to over 40 percent for the private sector.

6.2.3 Provincial Distribution

6.2.3.1 Health Infrastructure

Rift Valley Province has approximately 30 percent of the health infrastructure (1,106 facilities). It is followed by Eastern Province with about 16 percent (600 facilities). Nyanza Province has 407 health facilities. Northeastern and Western Provinces have the smallest number of facilities -- 69 and 234, respectively. Figure 6.2.3.1 and Table 6.2.3.1 present the distribution of the health infrastructure among the provinces.

Agency	Nairobi	Central	Coast	Eastern	North Eastern	Nyanza	Rift Valley	Western	Total	Percent
GOK	196	224	270	327	54	244	609	126	2,120	56%
NGO	35	79	46	166	3	39	228	97	716	20%
PRIVATE	110	41	21	103	13	26	271	41	635	23%
Total:	401	433	398	600	69	429	1,106	234	3,671	100%
Percent	11%	12%	11%	16%	2%	12%	30%	6%	100%	

Source: Development Solutions for Africa, Ltd.

TABLE 6.2.3.1: Health Infrastructure by Province and Agency.

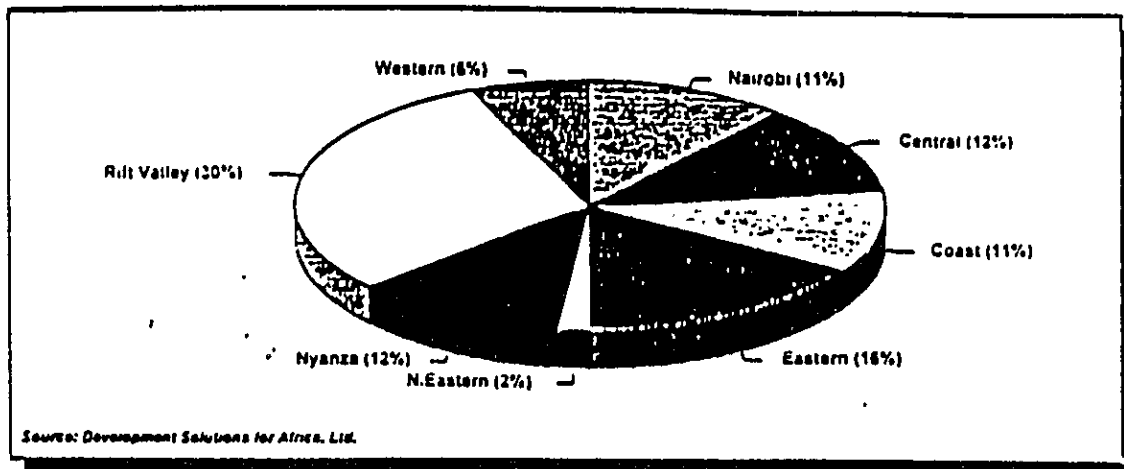


FIGURE 6.2.3.1: Health Infrastructure by Province.

6.2.3.2 Health Facilities

For the entire country, there are 14 health facilities for every 100,000 residents (one facility per 7,150 people). There are, however, substantial variations in the distribution of hospitals, health centers and other health facilities among the provinces. For example, in Western Province there are 8 facilities per 100,000 people, and in Nyanza there are 10. In contrast, in Rift Valley, there are 18 facilities per 100,000 residents and in Northeastern 22. The unequal distribution appears, in part, to reflect variations in population density which make it necessary to have more health facilities in the sparsely populated areas. Historical and political factors also appear to have influenced the distribution pattern. Table 6.2.3.2 shows the distribution of health facilities among the provinces in relation to population.

Province	Nairobi	Central	Coast	Eastern	North Eastern	Nyanza	Rift Valley	Western	Total
Number of Facilities	355	418	380	578	52	407	1 068	225	3 483
Population (000)	1 660	3 583	2,442	4 401	287	4 080	6 096	2 998	25 227
Facilities per 100,000 pop	21	12	16	13	22	10	18	8	14
* Population per Facility	4,678	8,573	6,427	7,614	4,629	9,973	5,768	13,324	7 222

Source: Development Solutions for Africa, Ltd.

TABLE 6.2.3.2: Health Facilities by Province and Population.

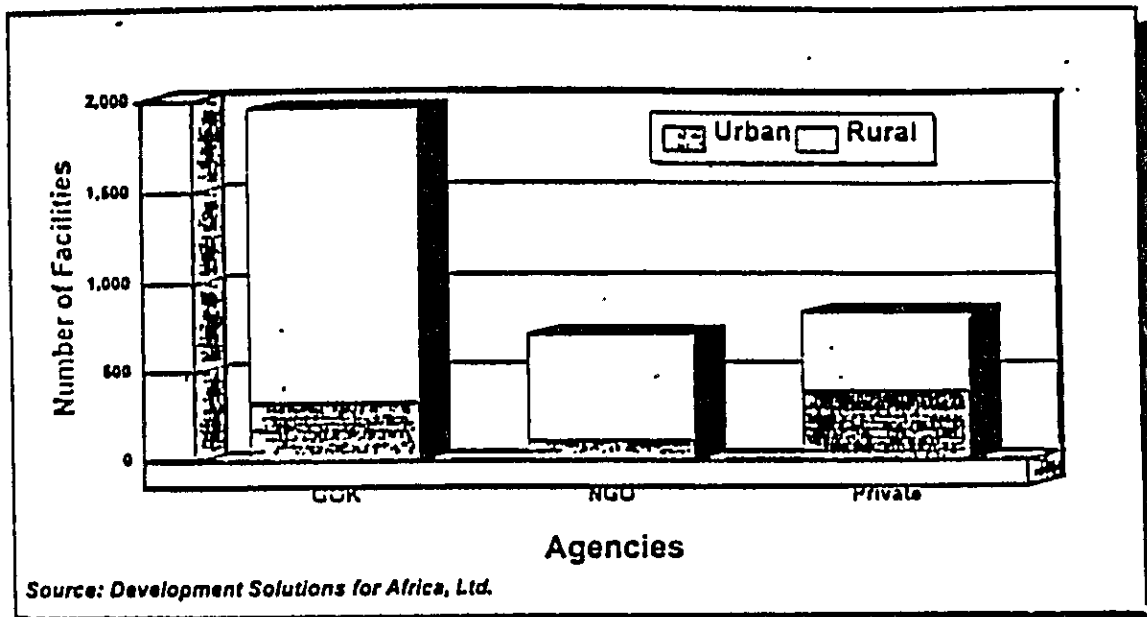


FIGURE 6.2.3.2: Health Facilities by Agency and Urban/Rural Setting.

There are also major variations in the urban-rural distribution of health facilities within the provinces (Figure 6.2.3.2). For example, in Central Province there are 8 facilities per 100,000 population (1:12,500) in urban areas and 12 per 100,000 (1:8,333) in rural setting. In contrast, in Western Province there are 25 health facilities per 100,000 in urban areas (1:4,000) and only 6 per 100,000 population (1:16,700) in rural settings. In Nyanza, there are 18 health facilities per 100,000 in urban areas and only 9 per 100,000 rural residents. Additional investigation is required to explain the reasons for these variations and how they impact on access and coverage of basic health services.

6.3 The Number and Distribution of Beds

There are almost 50,000 beds and cots among all the health facilities. Almost two thirds of them are in hospitals and about 17 percent are in nursing and maternity homes run mostly by private agencies. Another 17 percent of the beds are in health centers and dispensaries. Table 6.3 and Figure 6.3 show the distribution of beds among the various categories of health facilities.

Facility Type	Beds and Cots	
Hospital	32 122	65%
Health Center	6.783	14%
Dispensary	1 977	4%
Nursing & Maternity Homes	8.685	17%
Clinics & Medical Centers	156	0.3%
Total:	49.723	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.3: Number of Beds and Cots in Health Facilities.

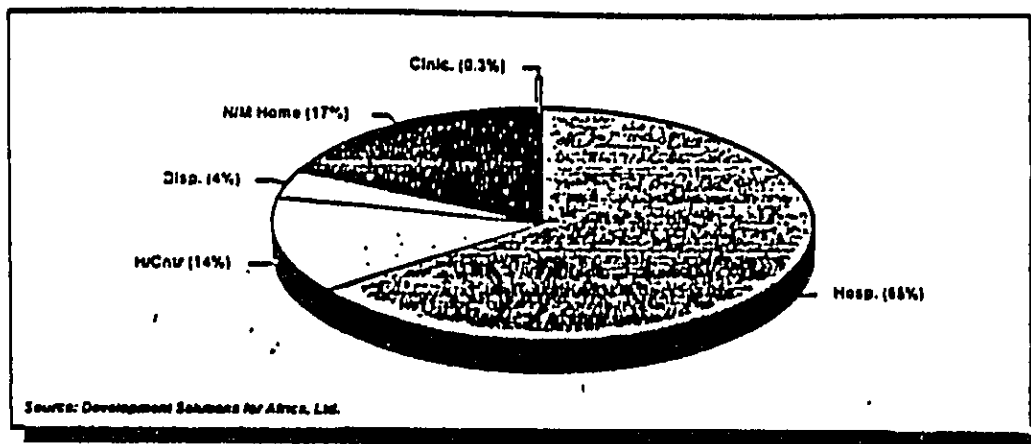


Figure 6.3: Beds and Cots in Health Facilities.

The World Development Report, *Investing in Health* states that one district hospital bed per 1,000 residents is required to support the "minimum package of essential clinical services" (WB 1993:135). In Kenya, there are approximately 2 beds per 1,000 residents, and 1.3 hospital beds per 1,000 residents. In view of Kenya's status as a low income country, these numbers suggest there are more beds and cots than are required to provide essential health services.

In this context, it is instructive to consider that countries such as Colombia, Thailand and Mexico with a GNP per capita at least four times higher than Kenya's have between 1.25 and 1.65 hospital beds per 1,000 residents (Barnum 1993). In the United States, large Health Maintenance Organizations (HMOs with hospitals) function effectively with about 1.5 beds per 1,000 members. And, they provide secondary and most tertiary care services in their package.

The relatively high number of beds have a significant impact on the distribution of health personnel in Kenya. Large urban, GOK facilities with many beds require a large staff, and they usually have priority in the deployment of staff. This practice has contributed to a serious deficit (approximately 50 percent) of professional staff in the smaller facilities with few or no beds. The lack of adequate personnel in dispensaries and health centers (together with their lack of pharmaceuticals and supplies) contributes to the flow of clients to the hospitals.

6.3.1 Urban Rural Distribution

There is a high concentration of beds in urban areas. While less than 19 percent of the Kenyan population live in urban areas, 45 percent of the beds are located there. The distribution pattern reflects the fact that most beds (82 percent) are in hospitals, nursing and maternity homes that are usually established in urban settings. In contrast, more than 90 percent of dispensary and health center beds are in rural areas. Table 6.3.1 and Figures 6.3.1a and 6.3.1b show the distribution of beds and cots in urban and rural areas.

Facility Type	Urban		Rural		Total	
	Beds	%	Beds	%	Beds	%
Hospital	16,422	51%	15,700	45%	32,122	100%
Health Center	507	7%	6,276	93%	6,783	100%
Dispensary	249	13%	1,728	87%	1,977	100%
Nursing & Mat. Homes	4,889	56%	3,796	44%	8,685	100%
Clinics & Med. Centers	66	42%	90	58%	156	100%
Total:	22,133	45%	27,590	55%	49,723	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.3.1: Beds and Cots by Facility Type and Urban/Rural Setting.

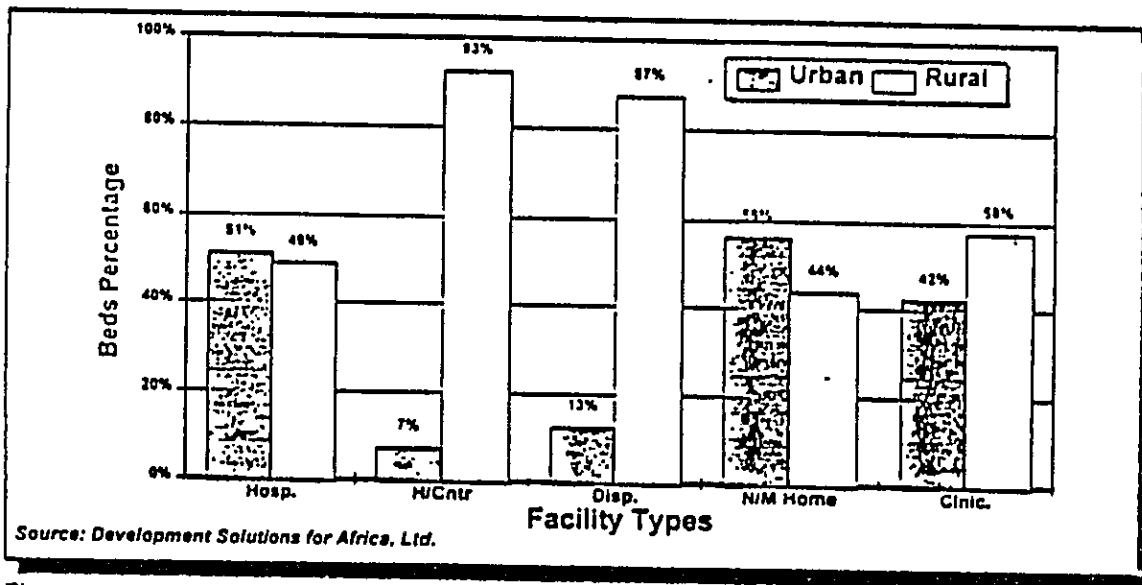


Figure 6.3.1a: Beds and Cots by Facility Type and Urban/Rural Setting.

The urban-rural variation in beds comes into sharper focus if we consider the relationship between beds and population. In urban areas, there are 550 beds/100,000 residents, while in rural settings, there are 130 beds/100,000 -- a ratio of more than 4:1 (see Figure 6.3.1b). The inequality in the distribution of beds is a serious management problem, particularly for the GOK. It is one reason -- along with the lack of health personnel and drugs -- that large numbers of rural residents by-pass dispensaries and health centers, and travel directly to government hospitals to seek care.

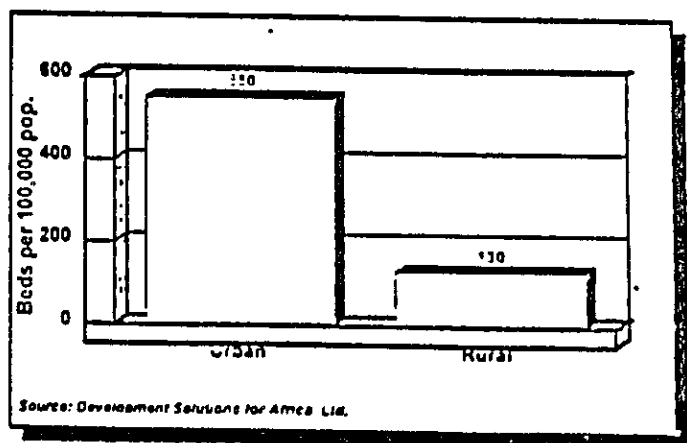


Figure 6.3.1b: Beds and cots by Population and Urban/Rural Setting.

6.3.2 Distribution by agency

The GOK operates over half the total number of beds and cots in the country. The remainder are almost evenly divided between the NGOs and the private sector. The GOK operates over 60 percent of the hospital beds and about 70 percent of all health center beds. The GOK alone provides one bed per 1,000 residents and, between them, the NGOs and private sector provide almost an equivalent number. The distribution of beds by agency are shown in Figures 6.3.2a and 6.3.2b and Tables 6.3.2a and 6.3.2b.

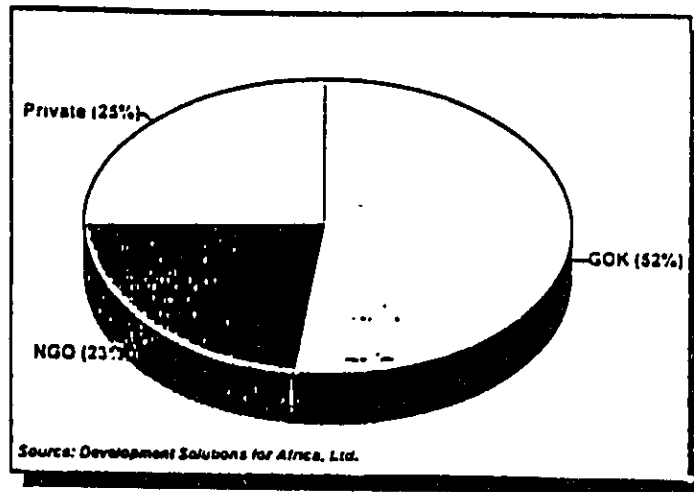


Figure 6.3.2a: Beds and Cots by Sector.

Facility Type	GOK		NGO		PRIVATE		Total	
Hospital	19,664	61%	8,685	27%	3,793	12%	32,122	100%
Health Center	4,763	70%	1,904	28%	116	2%	6,783	100%
Dispensary	1,218	62%	560	28%	201	10%	1,977	100%
Nursing & Mat. Homes	141	2%	196	2%	8,348	96%	8,685	100%
Clinics & Med. Centers					156	100%	156	100%
Total:	25,784	52%	11,325	23%	12,614	25%	49,723	100%

Source: Development Solutions for Africa, Ltd.

TABLE 6.3.2a: Beds and Cots by Facility Type and Sector.

There are major differences in the pattern of distribution within the private sector and the other agencies. In the GOK and NGO sectors, almost 95 percent of all beds are in hospitals and health centers. In contrast, only 31 percent of the private sector beds are in one of these facilities. In the private sector, almost two thirds of the beds are in nursing and maternity homes. In comparison, less than one percent of the GOK and NGO beds are in these facilities.

The ratio of urban:rural beds/population within the provider agencies also shows some interesting contrasts. For the GOK, the ratio is approximately 5:1 (5 urban beds to one rural bed per 1,000 population). For the private sector, the ratio is 9:1. In comparison, the urban rural distribution in the NGOs is much more equitable -- about 5 beds:1,000 in urban areas and more than 4 beds:1,000 population in rural areas.

Setting	Beds and Cots per 100,000 population			
	GOK	NGO	PRIVATE	"TOTAL"
Urban	303	51	197	550
Rural	64	44	22	130
Total:	102	45	50	197

Source: Development Solutions for Africa, Ltd.

TABLE 6.3.2b: Beds and Cots by Sector, Population and Urban/Rural Setting.

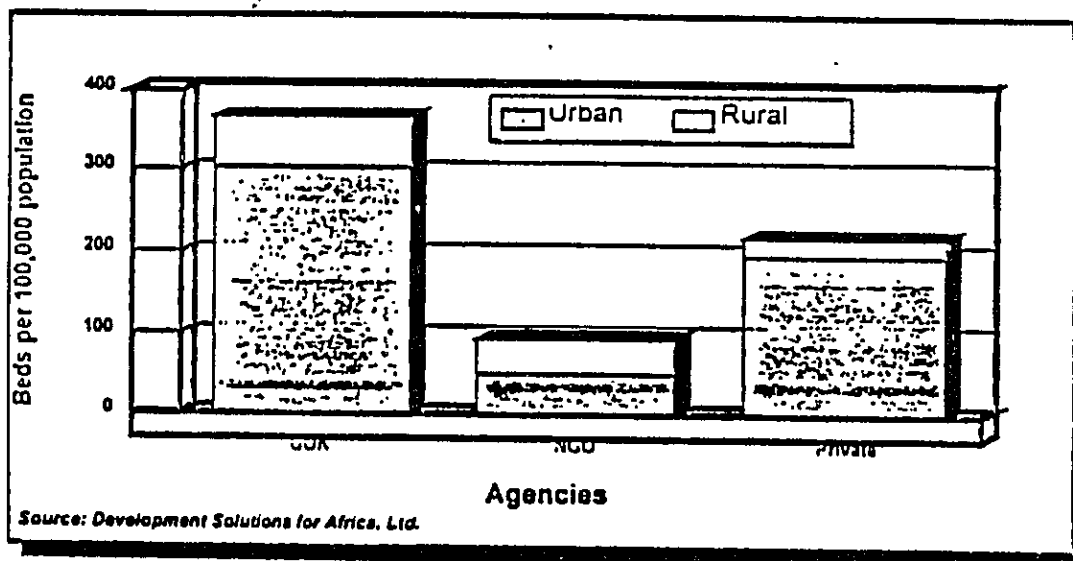


Figure 6.3.2b: Beds and cots by Sector, Population and Urban/Rural setting.

These figures indicate that the lack of careful planning for bed distribution within the GOK is partly responsible to the urban-rural inequities, and that the private sector concentration on urban areas contributes to this imbalance. In contrast, about 82 percent of the NGO beds are in rural areas where about 81 percent of the Kenya population lives.

6.3.2 Provincial Distribution

The Rift Valley has the largest number of beds among the provinces -- over 10,600 (21% of all beds in Kenya). It is closely followed by Nyanza with over 9,500 beds (19%). Western Province has almost 6,000 beds (12%). Northeastern and Coast Provinces have the lowest percentages - 2 percent and 8 percent respectively. Table 6.3.3 and Figures 6.3.3a and 6.3.3b present the distribution of beds and cots by province.

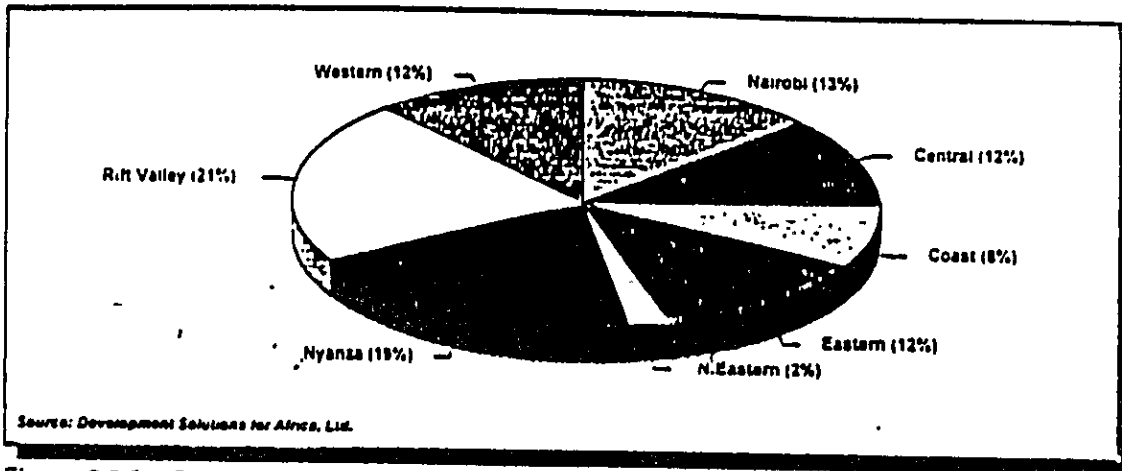


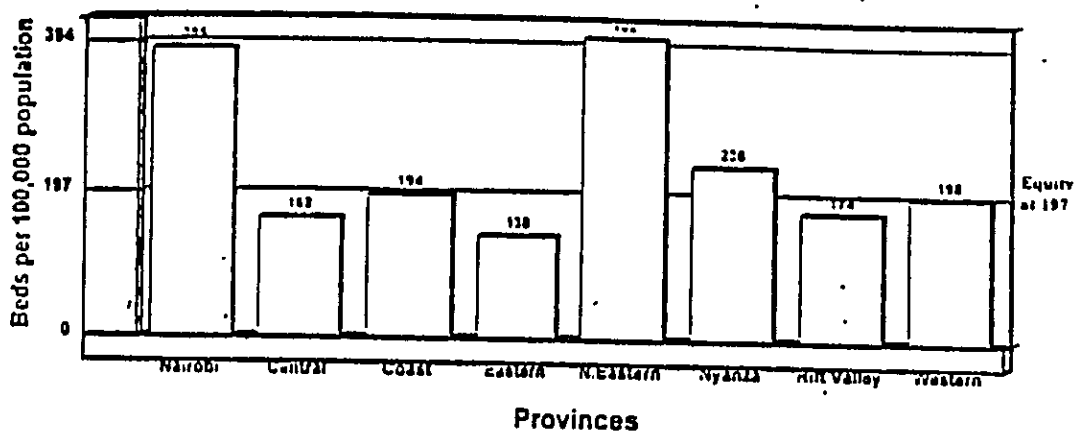
Figure 6.3.3a: Beds and Cots by Province.

Agency	Nairobi	Central	Coast	Eastern	North Eastern	Nyanza	Rift Valley	Western	Total	Percent
GOK	4,349	3,459	3,056	3,268	636	2,701	8,378	1,837	25,784	52%
NGO	73	1,950	332	2,188	519	2,107	2,472	1,688	11,325	23%
PRIVATE	971	391	785	538		4,768	1,768	2,412	12,814	25%
Total:	4,393	5,800	4,173	6,054	1,155	9,576	10,618	6,937	49,723	100%
Percent	13%	12%	8%	12%	2%	19%	21%	12%	100%	
Beds per 100,000 pop.	385	162	194	138	402	236	174	198	197	

Source: Development Solutions for Africa, Ltd.

TABLE 6.3.3 Beds and Cots by Province and Agency.

Table 6.3.3 also shows data on the distribution of beds by population (bottom line of the table). If the beds were equally distributed throughout the country, there would be 197 beds/100,000 within each province. There are, however, significant variations in the provincial distribution of beds. For example, Northeastern Province, the least populated province (1994 population: 287,000) has 1.155 beds or 402 beds/100,000 residents. This is a higher density of beds than Nairobi where there are 385 beds/100,000 residents. In contrast, Nyanza Province has 236 beds/100,000 residents and Western Provinces has almost 200. All provinces have more hospital beds than needed to meet the requirements of the essential clinical package -- 1 hospital bed/1,000 residents.



Source: Development Solutions for Africa, Ltd.

FIGURE 6.3.3b: Beds and Cots by Province and Population.

6.4 Health Sector Personnel

There are approximately 80,000 people directly employed in the health sector. This figure includes those in administrative, maintenance and subordinate staff positions. In the context of this report, the term KEY HEALTH PERSONNEL (KHP) is used to focus on a limited group of health professionals who provide inpatient and outpatient services -- doctors, dentists, clinical officers and nurses. Table 6.4 and Figure 6.4 show the distribution of health personnel by major classification.

MAJOR CLASSIFICATION		TOTAL	Percent	PER 100,000 POP.
M.O.	Medical Officers	3,300	4%	13
C.O.	Clinical Officers	2,300	3%	9
DEN	Dental Staff	600	1%	2
NUR	Nurses/Midwives	24,800	31%	98
CLS	Clinical Support	6,900	9%	27
PHO/T	Public Health	4,000	5%	16
PPP	Preventive/Promotive	1,400	2%	5
ADM	Administration	6,100	8%	24
MSP	Maintenance Support	5,300	7%	21
SUB	Subordinate Staff	24,600	31%	98
TOTAL:		79,300	100%	314

Source: Development Solutions for Africa, Ltd.

TABLE 6.4: Health Sector Personnel by Cadre and Population.

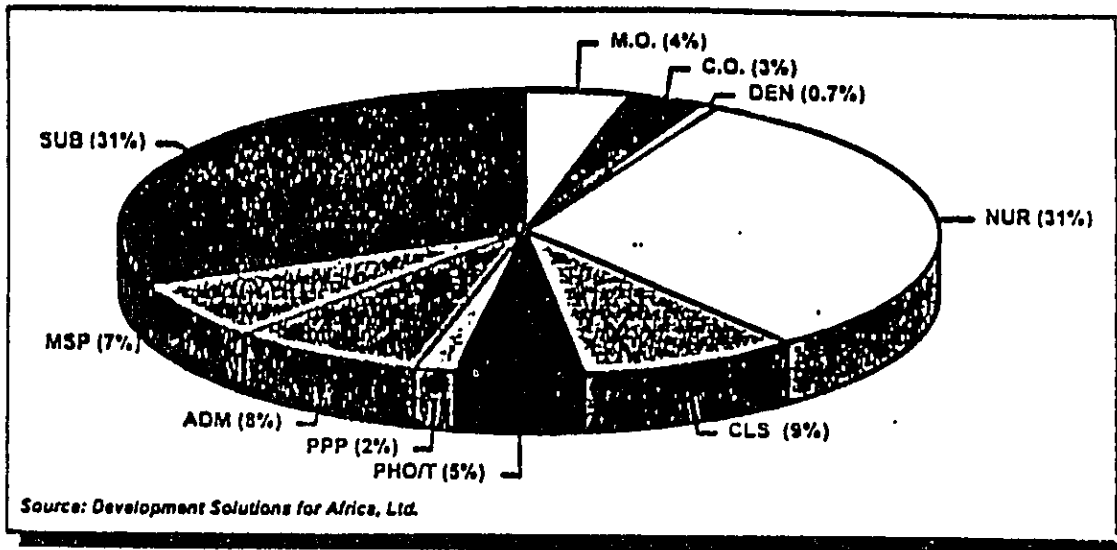


FIGURE 6.4: Health Sector Personnel by Cadre.

There are almost 25,000 nurses employed in the health sector and they are the largest category of personnel (31 percent). In Kenya today, there is one nurse for every 1,000 residents. Medical doctors and clinical officers (the cadres trained to diagnose and treat illness and disease) make up approximately 7 percent of the work force (a ratio of 1:4,500 residents). Nearly half the employees in the health sector (46%) are in administrative, maintenance and subordinate positions.

6.4.1 Distribution by Agency

The GOK is the largest employer in the health sector and has approximately 70 percent of all personnel, and a slightly smaller percentage of the key health personnel (68%). The private sector has 16 percent of all health sector personnel (19% of key health personnel) and the NGOs 14 percent (12% of key health personnel). These data indicate the central role of the public sector in the delivery of health services. They suggest that while policy reforms call for the expansion of private and NGO personnel in health service delivery, the role of the public sector will remain critical in the delivery of essential health services to the majority of the Kenyan population. Figure 6.4.1 and Table 6.4.1 present the distribution of health personnel in the GOK, NGO and private agencies.

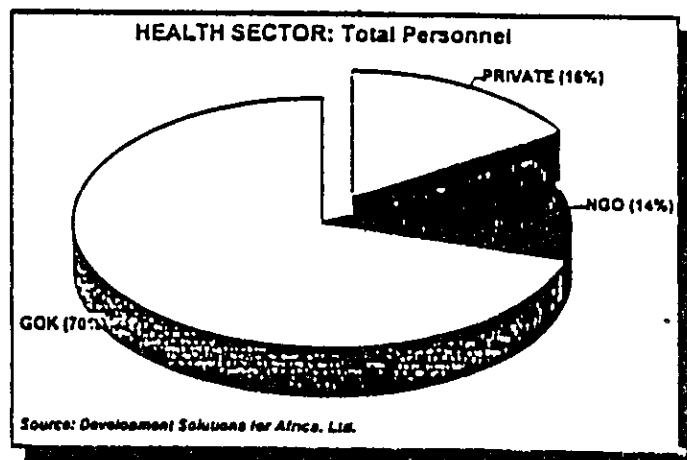


FIGURE 6.4.1: Health Sector Personnel by Agency.

		MAJOR CLASSIFICATION		GOK		NGO		PRIVATE		TOTAL	
KEY HEALTH PERSONNEL	M.O.	Medical Officers	1 100	73%	300	9%	1 900	58%	3,300	100%	
	C.O.	Clinical Officers	1 900	70%	120	4%	900	26%	2,300	100%	
	DEN	Dental Staff	400	67%		0%	200	33%	600	100%	
	NUR	Nurses/Midwives	18 200	73%	3 400	14%	3 200	13%	24,800	100%	
Sub-Total			21,300	69%	3 800	12%	5 900	19%	31 000	100%	
O T H E R H E A L T H PERSONNEL	CLS	Clinical Support	4 600	67%	400	6%	1 900	28%	6,900	100%	
	PHO/T	Public Health	4 000	100%					4,000	100%	
	PPP	Preventive/Promotive	1 400	100%					1,400	100%	
Sub-Total			10 000	81%	400	3%	1 900	15%	12 300	100%	
ADMINISTR- ATION AND SUPPORT	ADM	Administration	4 600	75%	600	10%	900	15%	6,100	100%	
	MSP	Maintenance Support	2,300	43%	1 700	32%	1 300	25%	5,300	100%	
	SUB	Subordinate Staff	17 700	72%	4 400	18%	2,500	10%	24,600	100%	
Sub-Total			24 600	68%	6,700	19%	4 700	13%	36,000	100%	
		TOTAL:	55,900	70%	10,900	14%	12,500	16%	79,300	100%	

Source: Development Solutions for Africa, Ltd.

TABLE 6.4.1: Health Sector Personnel by Agency.

6.4.2 Distribution by Type of Health Facility

Approximately two-thirds (67%) percent of the key health personnel (KHP) work in hospitals, most of which are located in urban centers. About 90 percent of those working in hospitals are involved with inpatient services. Thirty percent (30%) are employed in health centers and dispensaries and are involved mainly in outpatient curative and MCH/FP services. Table 6.4.2 and Figures 6.4.2a and 6.4.2b show the distribution of key health personnel in health facilities.

Facility Characteristics	Facility Classification	Doctors	Clinical Officers	Dental Offices	Nurses	Total	Percent
Large Facilities Mostly In-patient Services	HOSPITALS, NURSING/MATERNITY HOME	1,900	1,400	300	17,300	20,900	67%
Percent:		6%	7%	1%	73%	100%	
Smaller Facilities Mostly Out-patient Services	HEALTH CENTERS, DISPENSARY, CLINICS/MED. CENTER	1,400	900	300	7,500	10,100	33%
Percent:		14%	9%	3%	24%	100%	
TOTAL:		3,300	2,300	600	24,800	31,000	100%
PERCENT:		11%	7%	2%	80%	100%	

Source: Development Solutions for Africa, Ltd.

TABLE 6.4.2: Distribution of Key Health Personnel in Health Facilities - includes proportional distribution of Administrative and Training personnel.

The data indicate that the largest facilities, those with over 50 beds, absorb the majority of health personnel. They are given priority and while all are not fully staffed, most have adequate personnel to function effectively. The major problem lies in the shortage of personnel in the health centers and dispensaries that should be the focus of primary health care and other essential health services. These smaller facilities have only about half the number of Doctors, Clinical Officers and Nurses they need.

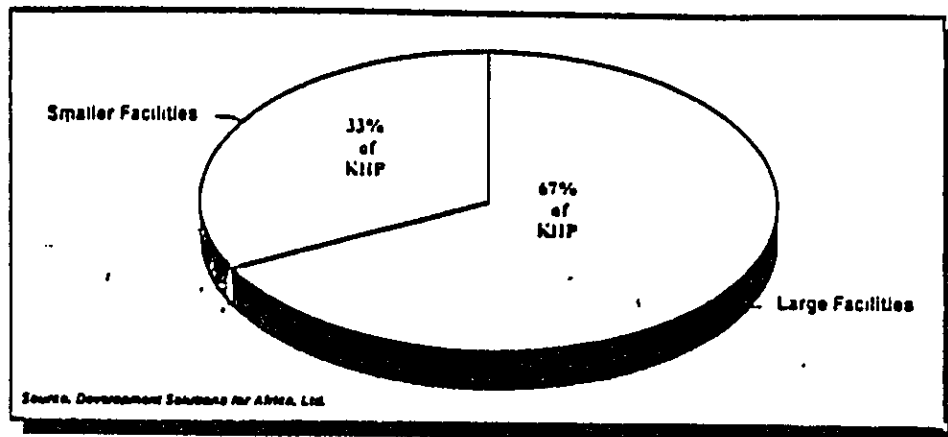


FIGURE 6.4.2a: Key Health Personnel in Health Facilities.

There is a critical lack of personnel able to diagnose and treat disease (doctors and clinical officers) in the dispensaries and health centers. It is one reason (along with the lack of drugs and medical supplies) that many citizens chose to bypass them and seek treatment at larger (and more costly) hospitals. Figure 6.4.2b shows the distribution of KHP in different types of facilities.

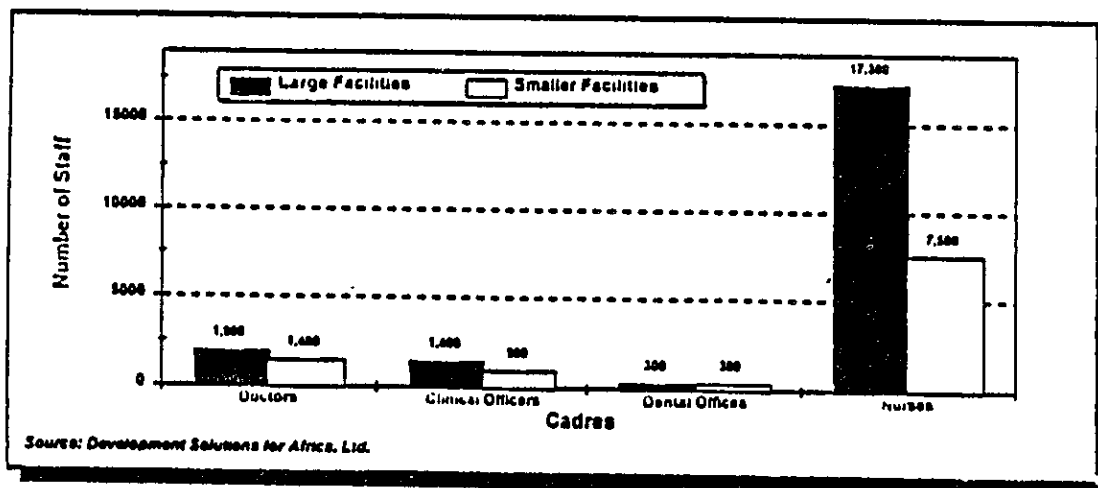


FIGURE 6.4.2b: Key Health Personnel in Different Types of Health Facilities.

The bias towards inpatient hospital care, and the demand for staff to fill these positions, has a strong impact on the training of health professionals. In spite of the long standing policy commitments to strengthen preventive and Promotive programs and rural health services, the training of doctors and nurses emphasizes their role in curative, inpatient care. This is consistent with how they are used, but inconsistent with the need for improved preventive/promotive services and policy statements made during the past 20 years.

6.4.3 Distribution by Urban Rural Setting

There is concentration of key health personnel in urban areas. Whereas less than 20 percent of the Kenyan population live in urban areas, 55 percent of the key health personnel live there. It means that for every 100,000 urban residents there are 413 key health personnel (413 KHP/242 residents), while for every 100,000 rural residents there are only 65 key health personnel (1 KHP/1,538 residents). Figure 6.4.3a compares the relationship between KHP and the population in urban and rural areas.

There are significant differences between the provider agencies in regard to the urban rural distribution of their key health personnel. The NGOs have a good balance which is close to the actual distribution of the population. The KHP in the private sector, however, are heavily concentrated in the urban areas where there are enough residents who can afford them. There are approximately 112 private sector KHP/100,000 urban residents, and only 7/100,000 rural residents. The distribution of GOK KHP falls between the other provider agencies but exhibits a strong bias towards the urban areas. Figure 6.4.3b shows the urban rural distribution of KHP by agency.

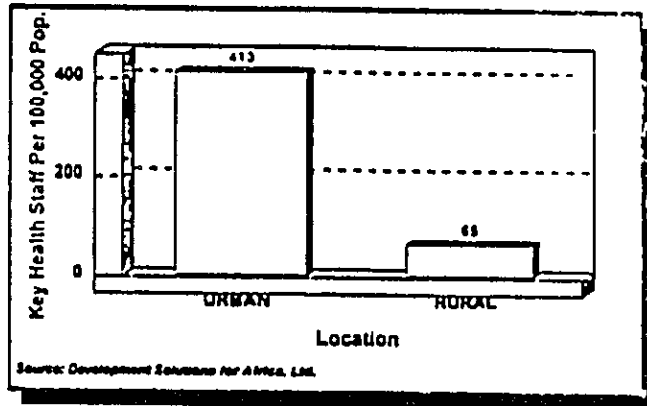


FIGURE 6.4.3a: Urban/Rural Distribution of KHP.

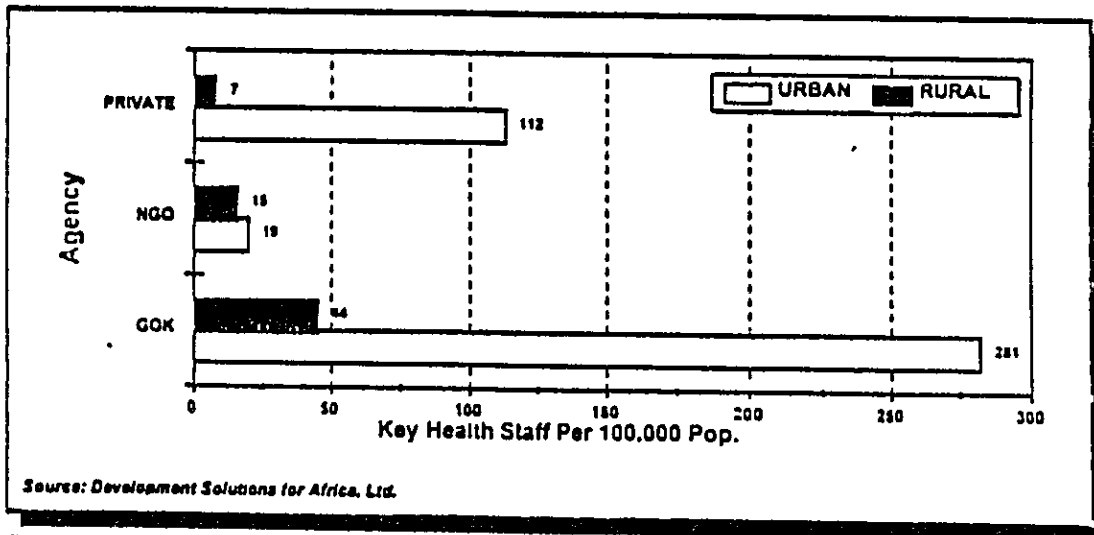


FIGURE 6.4.3b: Urban/Rural Distribution of KHP by Agency.

These findings have major implications for the improvement of health services to the rural population. They include:

- The NGOs could play an important role in the expansion of rural health services.
- The role of the private sector should continue to focus on urban services unless policy and regulatory reform can provide incentives to encourage their expansion to rural areas.
- The GOK should limit the percentage of KHP in urban areas and increase their deployment to rural facilities. As the public sector, they should give greater attention to a more equitable distribution of personnel. This may involve a reduction in their commitment to the staffing of hospitals and a reduction in the number of urban beds they operate.
- The need to revise the incentive schemes, and training of health professionals to prepare them technically and administratively to function in smaller facilities.

6.4.4 Provincial Distribution

The distribution of key health personnel among the provinces show substantial differences. While the high density of KHP in Nairobi is to be expected in view of the large number hospitals and private practitioners, there are still substantial variations between the other provinces. Whereas Western and Nyanza Provinces have 84 and 87 KHP/100,000 residents, Coast and Central Provinces have 126 and 115 KHP/100,000 respectively. Western and Nyanza Provinces have the lowest density of key health personnel and the highest Under 5 Mortality Rates. Table 6.4.4 and Figure 6.4.4 present the distribution of KHP by agency and province in relation to the population.

AGENCY	NAIROBI	CENTRAL	COAST	EASTERN	NORTH EASTERN	NYANZA	RIFT VALLEY	WESTERN	TOTAL		PER 100,000
									NO.	%	
GOK	319	89	49	89	137	58	74	58	82	68%	82
NGO/Mission	13	17	6	20	54	13	14	18	15	13%	15
Private	47	10	32	7	7	18	17	10	23	19%	23
TOTAL	379	115	126	97	198	87	106	84	121	100%	121

Source: Development Solutions for Africa, Ltd.

TABLE 6.4.4: Key Health Personnel per 100,000 by Province and Agency.

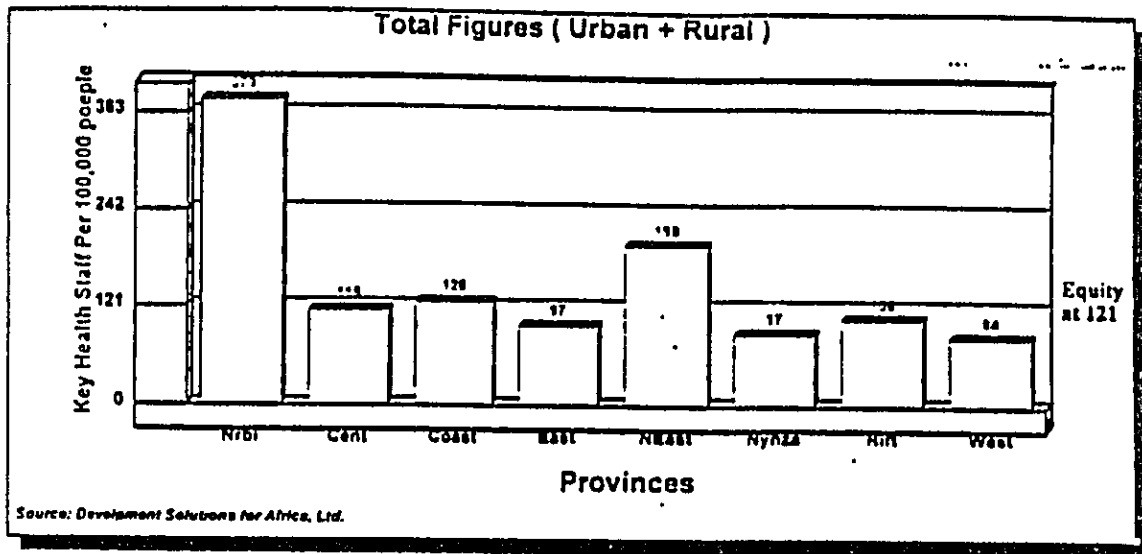


FIGURE 6.4.4: KPH by Province and Population.

These data suggest there is a need for the GOK, together with the other agencies, to establish guidelines and other incentives to redistribute health personnel in a more equitable fashion. This should include personnel targets for all categories of health professionals based on estimates of the number required to provide essential health services on an equitable basis in all provinces and in rural and urban settings. The data also indicate that in terms of health facilities (not beds) and personnel, Western and Nyanza Provinces have the smallest share of these resources in relation to the size of their populations. These resource deficits, together with their high fertility and HIV prevalence rates, suggest that Western and Nyanza Provinces are the most needy and should be given priority.

6.5 Education and Training Resources

Most health personnel are trained at one of the 24 centers that make up the Medical Training College. Until this year when the MTC Board was gazetted, it functioned as a part of the Ministry of Health. It will now function as a parastatal in a manner similar to Kenyatta National Hospital (KNH). The other major training facilities for health personnel are the universities and several NGOs which concentrate on the training of enrolled nurses.

6.5.1 The Medical Training College (M.T.C.)

The Medical Training College consists of 24 centers distributed throughout all eight provinces. Most provinces have three MTCs although Western and Northeastern have only one each. The largest MTC is in Nairobi and the other major ones are located in the major cities within each province -- Mombasa, Kisumu, Nakuru etc.. TABLE 6.5.1a presents the list of MTCs by province and district.

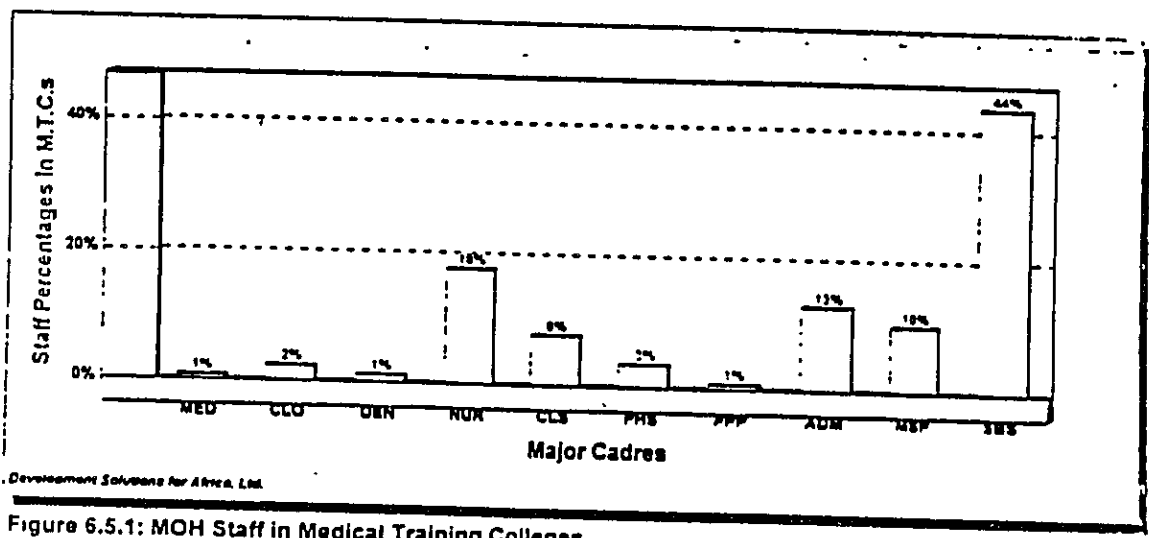
Number on Map	Province	District	Name
1	NAIROBI	Nairobi	M.T.C. MATHARE
2	"	"	M.T.C. NAIROBI
3	"	"	KAREN COLLEGE
4	CENTRAL	Kiambu	M.T.C. THIKA
5	"	Murang'a	M.T.C. MURANGA
6	"	Nyeri	M.T.C. NYERI
7	COAST	Kilifi	H.M.T.S. KILIFI
8	"	Kwale	M.T.C. MATUGA
9	"	Mombasa	SCH. OF CLINICAL MED.
10	"	"	M.T.C. MOMBASA
11	EASTERN	Embu 41	M.T.C. EMBU
12	"	Machakos	M.T.C. MACHAKOS
13	"	Meru	M.T.C. MERU
14	"	"	H.M.T.S. MERU
15	N. EASTERN	Garissa	M.T.C. GARISSA
16	NYANZA	Kisii 61	M.T.C. KISII
17	"	Kisumu	M.T.C. KISUMU
18	"	Homa Bay	M.T.C. HOMA-BAY
19	RIFT VALLEY	Kajiado	H.M.T.S. LOITOKITOK
20	"	Nakuru	M.T.C. NAKURU
21	"	Uasin Gishu	M.T.C. ELDORET
22	"	"	H.M.T.S. ELDORET
23	"	Baringo	M.T.C. BARINGO
24	WESTERN	Kakamega	M.T.C. KAKAMEGA

TABLE 6.5.1a: MOH Medical Training Colleges by Province and District.

The MTCs employ almost 2,000 people. More than half (54%), however, are in maintenance and support positions, or are classified as subordinate staff. Nurses are the most numerous faculty category (329 positions) followed by those in "clinical support (laboratory, pharmacy, radiology and therapy)," and public health. Most faculty have diplomas and post-basic training at the diploma level. Few have university level training. TABLE 6.5.1b and FIGURE 6.5.1 show the distribution of faculty and staff at the MTCs. The map that follows the tables shows the geographical distribution of the MTCs within the provinces.

Number (on Map)	Province	District	Name	Code	Doctors	Linear Officers	General Staff	Nurses	Clinical Students	Para Professionals	Prep & Phys	Admin Staff	Host & Student	Sub Total	Total
1	NAIROBI	Nairobi	IMTC MATHARE	9041				181							
2	"	"	IMTC NAIROBI	90111	41	21	51	441	591	171	41	791	491	2151	1,0
3	"	"	KAREN COLLEGE	90141								71	141	11	251
4	CENTRAL	Muranga	IMTC NIKA	90211				21				51	41	171	39
5	"	Muranga	IMTC MURANGA	90231				21				51	41	171	39
6	"	Nyeri	IMTC NYERI	90251				19				121		141	61
7	COAST	Kilifi	HMTS KILIFI	91031											51
8	"	Kwara	MTC MATUGA	14041											21
9	"	Mombasa	SCH OF CLINICAL MED	90181	41	11			21			41	41	271	35
10	"	"	IMTC MOMBASA	90341				51	51			101	51	311	70
11	EASTERN	Embu	IMTC EMBU	90411				141				51	21	271	55
12	"	Machakos	IMTC MACHAKOS	90441				161	41	41		41	51	381	74
13	"	Meru	IMTC MERU	90461				91				51	41	221	38
14	"	"	HMTS MERU	91011								41	11	131	28
15	IN EASTERN	Garissa	IMTC GARISSA	90511				71	51			21	31	181	23
16	NYANZA	Kisumu	IMTC KISUMU	90611				151				91	21	241	35
17	"	Kisumu	IMTC KISUMU	90621		11		281	91	81		181	51	591	144
18	"	Homa Bay	IMTC HOMA-BAY	90641				121				21	51	191	61
19	RIFT VALLEY	Malindi	HMTS LOITOKITOK	91041					11			31	51	91	18
20	"	Nakuru	IMTC NAKURU	90741	31	171		581	131	81		11	181	521	190
21	"	Uasin Gishu	IMTC ELDORET	90721				161				91	31	181	45
22	"	"	HMTS ELDORET	91021								31	51	81	20
23	"	Baringo	IMTC BARINGO	90811				211		41		61	31	111	45
24	WESTERN	Kakamega	IMTC KAKAMEGA	90931				141	51	81		131	91	321	81
Total:					11	41	18	329	142	63	12	340	187	813	1,856
Percent:					1%	2%	1%	18%	8%	3%	1%	13%	10%	44%	100%

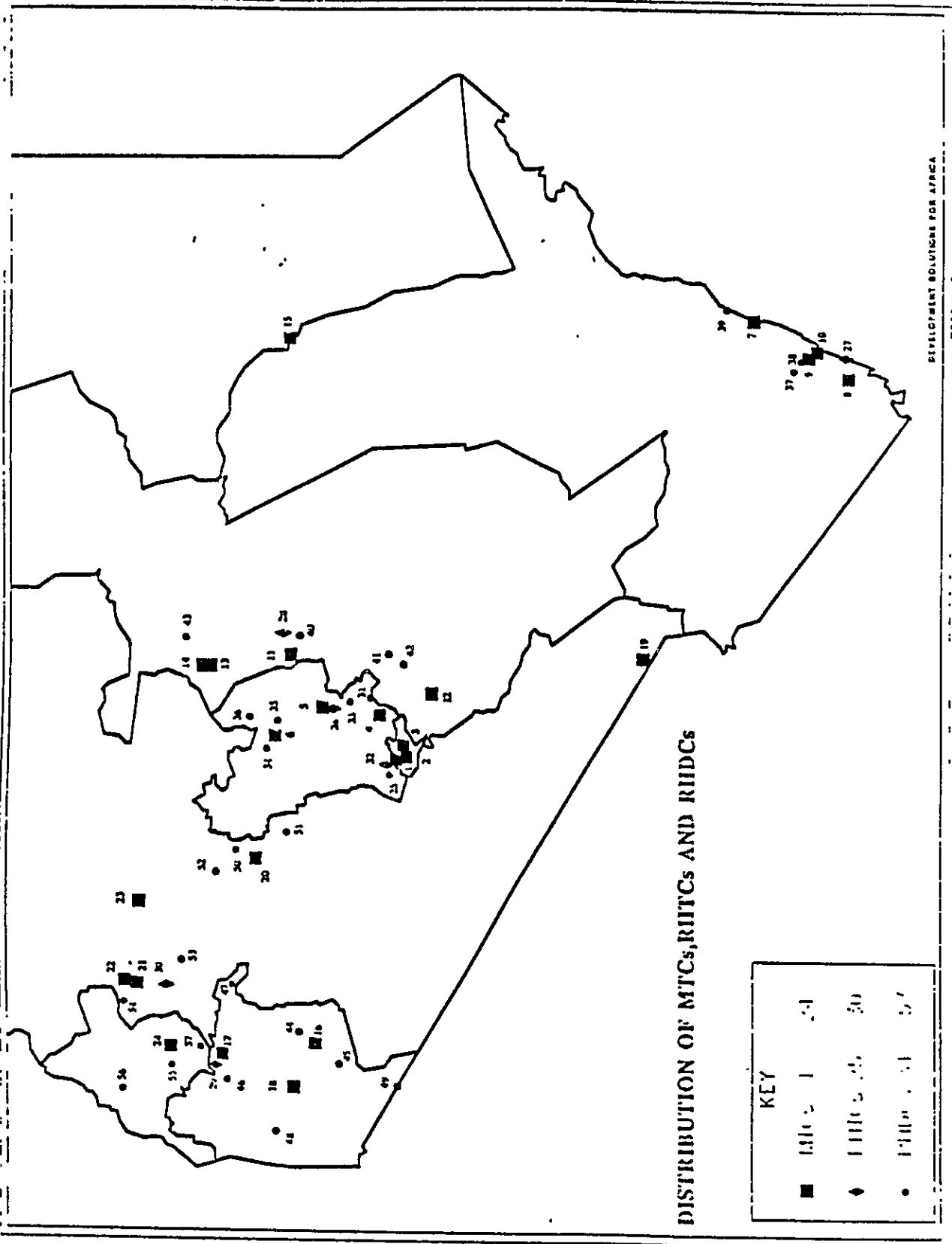
Table 6.5.1b: MOH Staff in Medical Training Colleges.



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Figure 6.5.1: MOH Staff in Medical Training Colleges.

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6.5.2 Rural Health Demonstration and Training Centers (RHDCs and RHTCs)

The 27 Rural Health Demonstration Centers (RHDCs) are health centers used for field training for students at the MTCs. Most have between 20 and 40 staff which is about double the number of staff found at the average MOH health center (between 10 and 20). The six Rural Health Training Centers (RHTCs) are large health centers with classrooms and residential facilities for trainees. They were constructed more than a decade ago by USAID for continuing education for health professionals. They are currently underutilized due to the lack of funds for training activities but are an important potential resource for future ones. The RHTCs have between 70 and 110 employees, and about half are health professionals. TABLE 6.5.2 presents a list of the RHDCs and RHTCs, and the distribution of personnel within them.

There are over 400 nurses at these training centers and they constitute about 30 percent of the personnel who work there. They are involved in the delivery of health services and function as tutors when trainees are stationed there. Public Health Officers (10%), clinical support staff (laboratory, pharmacy etc.-- 8%) and clinical officers (5%) are the other major groups of health professional based at the field training centers.

Number on Staff	Province	District	Name	Code	Doctors	Clinical Officers	Clinical Staff	Nurses	Clinical Support Staff	Public Health	Pharm.	Admin. Staff	House. & Clean.	Other Staff	Total	
1	CENTRAL	Mombasa	MUNYU RHDC	12591	1	1	1	11	2	3	1	2	1	8	27	
2	"	"	INYATHUNA RHDC	12601	1	1	1	11	1	1	1	1	1	6	23	
3	"	Muranga	MAKUYU MTC	13841	1	1	1	10	5	6	3	1	3	6	34	
4	"	Nyeri	ENDARASHA RHDC	15091	1	1	1	11	2	2	3	2	1	7	28	
5	"	"	INGORANO RHDC	15101	1	1	1	12	2	1	1	2	1	9	32	
6	"	"	WARAZO RHDC	15111	1	1	1	8	2	2	4	1	1	8	26	
7	CCAST	Kenya	MAHAKANI RHDC	15701	1	1	1	18	5	6	1	1	1	8	39	
8	"	"	RAHAI RHDC	15711	1	1	1	9	2	2	2	1	1	5	27	
9	"	"	WIPINGO RHDC	1721	1	1	1	5	2	2	2	1	1	4	17	
10	EASTERN	IEmbu	SIKAGO RHDC	15431	1	1	1	8	2	1	1	1	1	10	31	
11	"	Macarao	MATUU RHDC	110441	1	1	1	4	8	4	3	2	1	9	35	
12	"	"	MAWALA RHDC	110451	1	1	1	4	1	1	1	1	1	8	19	
13	"	Meru	RUIRI RHDC	11881	1	1	1	2	2	2	2	1	1	6	22	
14	INYANZA	Arusha	MARANI RHDC	12701	1	1	1	3	3	3	2	1	1	12	32	
15	"	"	INDURU RHDC	12711	1	1	1	10	2	10	1	2	2	10	38	
16	"	Musomali	KOIBEWA RHDC	13381	1	1	1	3	2	5	3	2	1	15	34	
17	"	"	MUMOHONI RHDC	13391	1	1	1	1	4	2	1	1	1	10	32	
18	"	Momaya	SINDOR RHDC	14741	1	1	1	8	2	2	2	1	1	11	28	
19	"	Kuna	ISEBANIA RHDC	14731	1	1	1	9	1	2	1	1	1	4	22	
20	RIFT VALLEY	Narok	RAMATI RHDC	11789	1	1	1	11	4	5	2	2	1	9	35	
21	"	"	GILGIL RHDC	117901	1	1	1	14	4	7	2	2	1	4	34	
22	"	74	MOGOTIO RHDC	117911	1	1	1	9	2	2	1	1	1	6	22	
23	"	Uasin Gishu	BURNT FOREST RHDC	119271	1	1	1	12	2	3	1	1	1	7	31	
24	"	"	URBO RHDC	12351	1	1	1	15	2	4	1	1	1	4	33	
25	EASTERN	Wajir	BUSUMBI RHDC	13571	1	1	1	4	1	1	1	1	1	3	16	
26	"	"	MUNDUA RHDC	13581	1	1	1	2	1	1	1	1	1	5	22	
27	"	Wajir	WADALE RHDC	13591	1	1	1	9	1	3	1	1	1	3	19	
Sub-total (R.H.D.C.):					1	30	2	277	73	88	58	48	28	233	844	
Percent (R.H.D.C.):						4%	0.2%	33%	9%	12%	7%	3%	3%	28%	100%	
28	CENTRAL	Mombasa	KARURI MTC	12611	1	1	1	9	4	16	4	2	5	25	63	
29	"	Muranga	MAHAGUA MTC	13951	1	1	1	29	4	4	4	13	9	42	109	
30	CCAST	Kenya	WARI MTC	16131	1	1	1	17	5	5	2	1	5	26	71	
31	EASTERN	IEmbu	KARURU/MO RHTC	15441	1	1	1	22	4	3	2	8	4	22	71	
32	INYANZA	Arusha	CHULAMBOR MTC	13401	1	1	1	24	3	4	4	10	9	40	103	
33	RIFT VALLEY	Narok	MOSORIOT MTC	13091	1	1	1	4	1	2	1	1	1	2	7	
Sub-total (R.H.T.C.):					1	24	1	130	31	33	20	53	37	177	509	
Percent (R.H.T.C.):						0.2%	3%	0.2%	26%	8%	7%	4%	10%	7%	35%	100%
TOTAL:					1	54	3	407	104	124	78	99	63	410	1353	
PERCENT:						0.1%	4%	0.2%	30%	8%	10%	8%	7%	5%	30%	100%

Table 6.5.2: MOH Staff in Rural Health Demonstration and Training Centers.

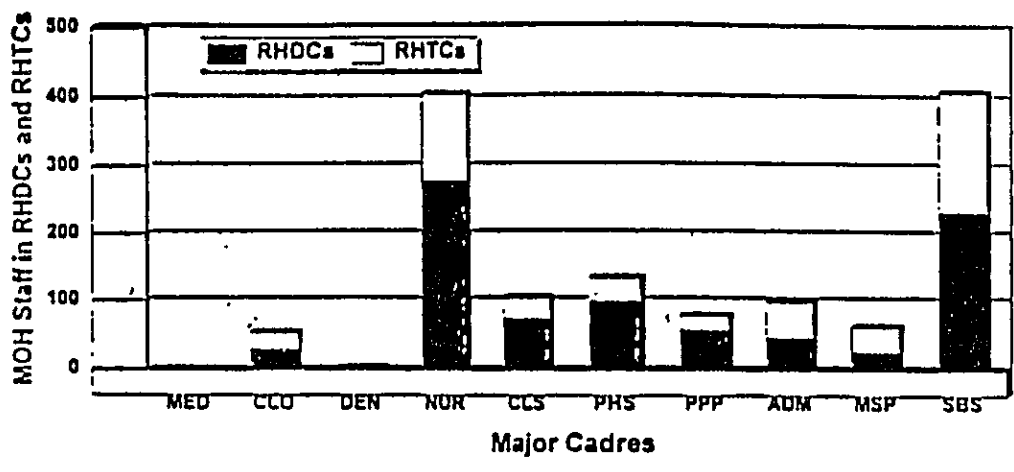


Figure 6.5.2: 'MOH Staff in Rural Health Demonstration and Training Centers.

Strategic Implications

1. The construction or expansion of health facilities, particularly those with large numbers of beds should not be part of the Joint Strategy.
2. The GOK should encourage and support the expansion of mission and NGO health services in rural areas. The GOK should support and encourage the expansion of their activities through financial grants, supplies and training.
3. The private sector should continue to focus on urban services unless policy and regulatory reform can provide incentives to encourage their expansion to rural areas.
4. The GOK should limit the percentage of personnel in urban areas and increase their deployment to rural facilities. JICA and USAID can encourage this by giving priority in resource allocation and training to facilities and personnel in rural areas.
5. The information and planning systems of the MOH should be modified to include data on the resources of the NGO and private sectors.
6. The future plans for the health sector should address the shortage of clinical officers, and ameliorate the inequities in the distribution of personnel among the provinces. At the provincial level, the PHMTs should work with the DHMTs to determine where the new personnel should be sent.
7. The education and training of health personnel should prepare them technically and administratively to implement and manage health services.
8. Training opportunities should be made available to those in the NGO and private sectors. Pharmacists and CBD agents should be included in the training strategy.