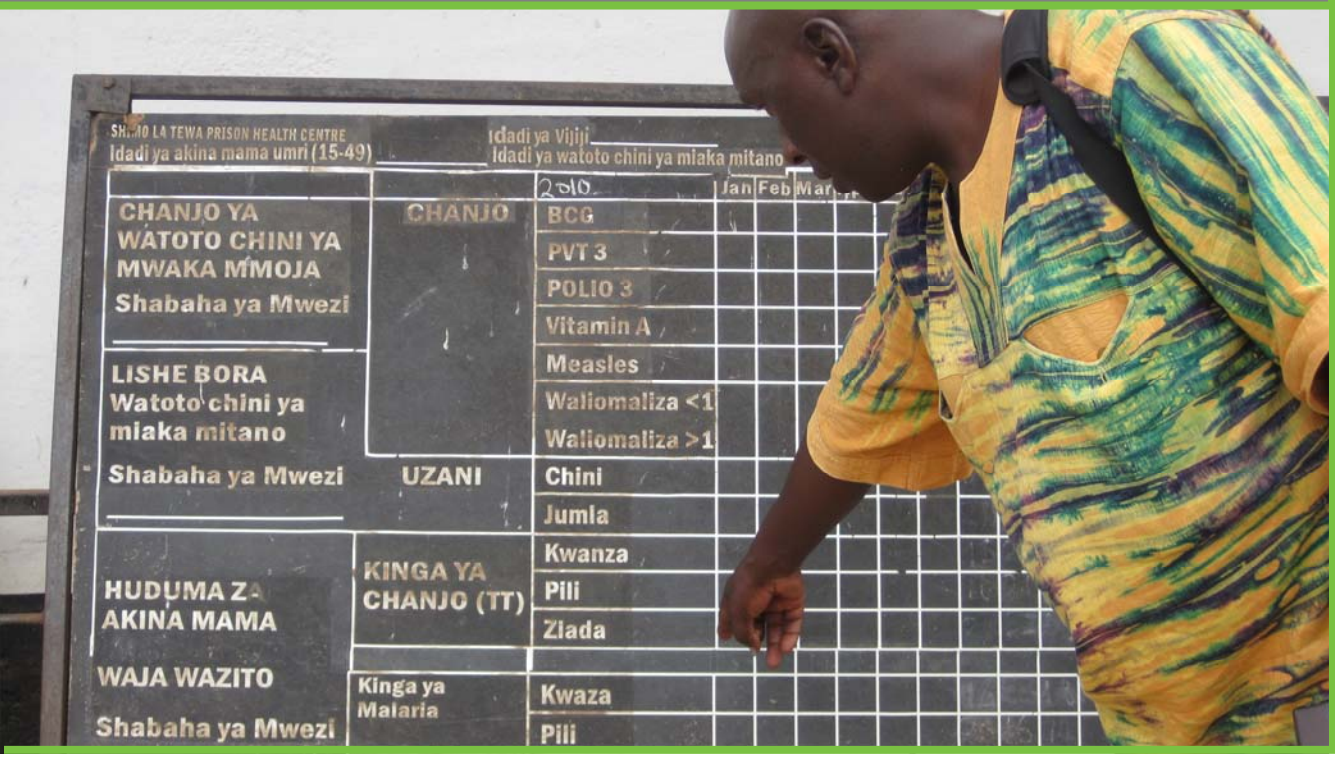
Republic of Kenya

KENYA HEALTH SYSTEM ASSESSMENT 2010



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HEALTH SYSTEMS 20/20

August 2010
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Mission

The Health Systems 20/20 **cooperative agreement,** funded by the U.S. Agency for International Development (USAID) for the period 2006-2011, helps USAID-supported countries address health system barriers to the use of life-saving priority health services. Health Systems 20/20 works to strengthen health systems through integrated approaches to improving financing, governance, and operations, and building sustainable capacity of local institutions.

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Abt Associates Inc. | 4550 Montgomery Avenue | Suite 800 North
| Bethesda, Maryland 20814 | P: 301.347.5000 | F: 301.913.9061
| www.healthsystems2020.org | www.abtassociates.com

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KENYA HEALTH SYSTEM ASSESSMENT 2010

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ACRONYMS

ADR	Adverse Drug Reaction
AIDS	Acquired Immune Deficiency Syndrome
AOP	Annual Operational Plan
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
CDC	Centers for Disease Control and Prevention
CHAK	Christian Health Association of Kenya
CHEW	Community Health Extension Worker
CHW	Community Health Worker
CSO	Civil Society Organization
DANIDA	Danish International Development Agency
DHMT	District Health Management Team
DMO	District Medical Officer
DPHK	Development Partners in Health Kenya
EML	Essential Medicines List
FBO	Faith-based Organization
FIF	Facility Improvement Fund
GDP	Gross Domestic Product
GOK	Government of Kenya
HENNET	Health NGOs Network
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HR	Human Resources
HRH	Human Resources for Health
HRIS	Human Resources Information System
HMN	Health Metrics Network
HMSF	Hospital Management Services Fund
HSA	Health System Assessment
HSS	Health System Strengthening
HSSF	Health Sector Service Fund
HS 20/20	Health Systems 20/20
ICC	Interagency Coordinating Committee
IPPD	Integrated Payroll and Personnel Database
JAPR	Joint Annual Performance Review

JICC	Joint Interagency Coordinating Committee
KDHS	Kenya Demographic and Health Survey
KEHP	Kenya Essential Health Package
KEMSA	Kenya Medical Supplies Agency
KNBS	Kenya National Bureau of Statistics
KNPP	Kenya National Pharmaceutical Policy
KEPSA	Kenya Private Sector Alliance
KSH	Kenyan Shilling
MDGs	Millennium Development Goals
MOH	Represents both the MOMS and MOPHS, together
MOMS	Ministry of Medical Services
MOPHS	Ministry of Public Health and Sanitation
MOU	Memorandum of Understanding
MTC	Medicines and Therapeutic Committee
NACC	National AIDS Control Council
NASCOP	National AIDS/STD Control Program
NGO	Nongovernmental Organization
NHA	National Health Account
NHIF	National Hospital Insurance Fund
NHISCC	National Health Information System Coordinating Committee
NHSSP II	National Health Sector Strategic Plan II
NMTC	National Medicines and Therapeutics Committee
OOP	Out of pocket expenditures
PEPFAR	President's Emergency Plan for AIDS Relief
PHMT	Provincial Health Management Team
PHU	Provincial Health Unit
PMTCT	Prevention of Mother-to-Child Transmission
PPB	Pharmacy and Poisons Board
SCG	Standard Clinical Guidelines
SPA	Service Provision Assessment
SWAp	Sector Wide Approach
TB	Tuberculosis
USAID	United States Agency for International Development
USD	United States Dollars
USG	United States Government
VCT	Voluntary (HIV) Counseling and Testing
WHO	World Health Organization

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Finally, the authors are grateful to the respondents whose names and affiliations are cited in Annex B and the respondents at the health management units and health facilities visited in the Coast, North Eastern and Rift Valley provinces, listed in Annex C.

FOREWORD

As the global community continues to scale up HIV/AIDS, TB, and malaria interventions, it is vital to understand the state of the health systems in which these services are being delivered. Good health systems should be able to deliver effective and quality health care services to the needy in a cost effective way. To address the health challenges facing the health sector, the health ministries have, in recent years, been implementing health sector reforms with health system strengthening as a top health reform agenda. The National Health Sector Strategic Plan (NHSSP II) underscores the importance of health system strengthening with major efforts directed at institutional strengthening, organizational development, improving the availability of human resources for health, health financing, service delivery and information, medical commodity availability, and improved donor coordination.

As the ministries continue to strengthen the health system, a thorough understanding of its unique strengths and weaknesses becomes paramount. The Health Systems Assessment (HSA) process allows countries to systematically assess their national health system and provides policymakers with information on how to strengthen the health system. The HSA approach, therefore, provides a comprehensive assessment of key health systems functions, organized around the six WHO building blocks: governance, health financing, health service delivery, human resources, medicines and medical product management, and health information systems.

This HSA report, which was undertaken with the support of USAID, is the most recent comprehensive review of the entire health system. It draws on primary data collection process through key informant interviews, as well as on the wealth of existing studies and information about the trends and challenges facing the health sector. The report provides critical information about the strengths and weaknesses and recommendations to improve the system.

The HSA report is expected to provide valuable input to the review of the Kenya Health Policy Framework and the Annual Operation Plan (AOP) 7, and the development of the Health Sector Strategic Plan IV that is underway.

In conclusion, the Ministry of Public Health and Sanitation and the Ministry of Medical Services would like to sincerely thank the USAID for providing the financial resources and the Health System 20/20 project for providing the technical support required to undertake the assessment. The Ministry of Public Health and Sanitation and the Ministry of Medical Services also wishes to recognize all the stakeholders and health facilities that provided critical information, without which the report would not have been competed.

Dr.S.K.Sharif, MBS,MBChB,M.Med,DLSHTM,Msc
Director of Public Health & Sanitation

Dr.F. M. Kimani,
Director of Medical Services

EXECUTIVE SUMMARY

INTRODUCTION

As the global community continues to scale up HIV/AIDS, TB, and malaria interventions, it is vital to understand the state of the health systems in which these services are being delivered. Good health systems should deliver effective, safe, quality health services to those in need, with a minimum waste of resources.

In recent years, Kenya has been implementing important health sector reform measures, and health system strengthening has become a priority. The formation of the Grand Coalition Government in 2008 resulted in the Ministry of Health being split into two ministries: the Ministry of Medical Services (MOMS) and the Ministry of Public Health and Sanitation (MOPHS). The MOMS administers secondary and tertiary hospitals (levels 4–6) of the health system, while the MOPHS oversees primary health care facilities (levels 1–3). The split adversely slowed down the sector partnership arrangement which was steadily gaining momentum. Kenya's second National Health plan (NHSSP II) underscores the importance of system strengthening with major efforts aimed at institutional strengthening, organizational development, improving the availability of human resources for health, health financing, service delivery and information, medical commodity availability, and improved donor coordination (MOH 2005).

Continuing to strengthen Kenya's health system requires a thorough understanding of its unique strengths and weaknesses. The ministries of health used the HSA process to evaluate the state of the health system at the end of the current Annual Operational Plan (AOP), as input to the formation of the new AOP. The Health Systems Assessment (HSA) process allows countries to systematically and rapidly assess their national health system and provides policymakers and program managers with information on how to strengthen the health system. The approach provides a comprehensive assessment of key health systems functions, organized around six technical modules: governance, health financing, health service delivery, human resources, medical products management, and health information systems. Following the assessment, it is most useful for in-country counterparts to gather and create an actionable plan, specifying key interventions, timelines, and a delegation of responsibility for implementing priority recommendations.

The HSA in-country process in Kenya consisted of four elements: a consensus-building meeting with the ministries of health; a large stakeholder meeting with donors, implementing partners, bilateral organizations, and government representatives; national-level key informant interviews; and field visits to facilities and health management offices. A longer process description and lists of key informants and field visits are provided in the Annexes.

The following sections summarize the key findings of the six technical modules of the HSA for the health ministries. Cross-cutting issues are detailed in the performance criteria section of the full report, as are overall and module-specific recommendations for Kenya.

GOVERNANCE

Overall, there is limited, but increasing, participation of the mainstream civil society organizations in the development of health policies and the planning process for the health sector. Nevertheless, ministry

officials dominate sector policy development and planning. The mainstream civil society organizations, including citizens, communities, NGOs, and the media, have not claimed space to establish representation in the existing mechanisms and forums for developing the sector's plans. The recent split of the Ministry of Health and the resulting emergence of many coordination committees have made the planning and governance process even more complex for civil society organization representation.

The split of the Ministry of Health and the existence of many coordination committees have also made coordination at the ministerial level more difficult.

The NACC Secretariat coordinates the day-to-day implementation of Kenya National AIDS Strategic Plan (KNASP) III, including acting on decisions made by the Board and the ICC/ICC Advisory Board. The KNASP III is organized in four pillars with each pillar being led by a Pillar Convener who coordinate all implementers and channel results upward in the structure to the KNASP III Oversight and Performance Monitoring Committee and Inter Agency Coordinating Committee among others. This structure supported by the annual Joint AIDS Programme Reviews (JAPR) ensures effective coordination of HIV activities and their integration and linkage into the related sectors of the economy.

A significant amount of information about the state of health of the population is being generated and progress has been made in sharing information with the public through planning and review summits and through the health ministries' websites. There are however, serious challenges to collecting reliable, good quality data that can be used for policy making in the sector. The fourth annual operational plan does recognize this and attempts to strengthen data quality. Synthesis and packaging of the usable information for policy decisions is also weak.

The health sector may yet need greater regulation. The recommendations contained in the Report on the Review of the Health Act have yet to be implemented. The existing regulatory agencies—including the Pharmacy and Poisons Board and medical professional associations—do not have adequate resources to enforce regulations.

The introduction of performance contracts and the citizen service charter, which have been cascaded at all levels, is expected to further improve governance and better engage communities in health sector service delivery.

FINANCE

The health sector in Kenya continues to be financed from three primary sources: public, private including households (consumers), and donors. According to the 2005/06 National Health Accounts (NHA), the total health expenditure in Kenya was equivalent to about 4.8 percent of GDP at current market prices, which translates to per capita health spending of approximately Ksh 1,987 ($27) (GOK 2009b).[1] Households remain the largest contributors of health funds, at 35.9 percent, followed by the government, and then donors, who contribute approximately 30 percent. The high out of pocket household expenditures and the dependency on donors, especially for priority interventions, has prompted the government to embark on developing a health financing strategy. In the short term, the National Hospital Insurance Fund (NHIF) will be restructured to play a bigger role in financing health and a review is currently underway.

The public health sector is committed to a new policy of funding health facilities directly, after a successful pilot in Coast province. This direct funding approach is based on the gazettement of a new Health Sector Service Fund (HSSF) and a Hospital Management Services Fund (HMSF), both scheduled

[1] All dollar figures are USD.

to be rolled out in July 2010. However, fund management still needs to be developed. The District Health Management Teams (DHMTs) who will play a key role in management of these funds are yet to be trained; and in turn, training will need to cascade to lower level facilities. The focus should now shift to review of the public health act in order to make health facilities accounting units, consistent with the proposed constitution. Equally, the development of the lagging health care financing strategy needs to be fast-tracked.

HIV/AIDS continues to be largely financed by Development Partners (who contribute 75% of resources), which poses questions with regard to the sustainability of the Kenyan HIV/AIDS program. The Government of Kenya, through the National AIDS Control Council and in collaboration with other stakeholders considers planning for predictable and sustainable HIV/AIDS financing a top priority. Towards this end, a Steering Committee has been constituted to guide in the development of alternative ways of raising domestic resources.

HUMAN RESOURCES FOR HEALTH

Kenya presents a unique case of Human Resources for Health (HRH) in sub-Saharan Africa. While there is an absolute shortage of healthcare workers, the provider-population ratio of 1.69/1000 (for all cadres of providers) is relatively high for countries in the region. The most pressing problem is the drastically unequal distribution of workers, by urban/rural areas, by regions, and by level of care. Rural dispensaries have 20 percent fill rates of their nursing establishments, while district hospitals have 120 percent fill rates. Approximately 25 percent of the HRH budget for the entire public sector is taken up by the two referral hospitals.

The reasons for low overall fill rates are often misstated as well. Most MOH publications as well as assessments of HRH in Kenya decry the "retention problem" as well as "brain drain" to other countries as key drivers of the HRH shortage. Yet turnover rates in Kenya continue to hover between 3–4 percent, quite low for these statistics anywhere in the world, for any industry. (Nursing turnover is 13 percent in the US (Kovner et al. 2007).) While brain drain, or emigration to other countries, receives much publicity, nurse emigration in 2009 was approximately 300 nurses,[2] a tiny fraction of the nursing population in Kenya. Unlike most other countries in the region with a shortage of medical staff, there exists a large (yet undefined) population of unemployed healthcare providers, especially nurses, in the labor market in Kenya. The shortage of health workers has compromised service delivery including key programmes such as HIV/AIDS and this prompted the government request development partners to assist in the interim by employing health workers on contract terms. To date over 3000 health workers are employed on contract basis. On her part the government has agreed to absorb these health workers once their contract comes to an end.

MEDICAL PRODUCTS MANAGEMENT

In general, the existing institutional framework to carry out medical products management functions requires strengthening at all levels. Shortage of staff to support various functions is a challenge. Increasingly, there is a need to strengthen pre-service training at the tertiary level, to align skills with the requirements of the health sector. Low budgetary allocation to support the Medium Term procurement plan was found to be a significant contributor to drug shortages at public health facilities. Other key findings include:

- There are several distribution systems for pharmaceuticals, and both pull and push systems are in

[2] Interview, Nursing Council of Kenya, 2010.

use. Although all facilities were to be transitioned to the pull system, about 3200 (70 percent) are still on the push system. Challenges experienced in the roll-out of the pull system resulted in halting further expansion in 2009. The push system results in shortages of many drugs, while others are in such over-supply they expire on the shelves.

- The policy and regulatory framework is weak. A comprehensive law is needed to address all policy and regulatory issues in the pharmaceutical sector. Currently the sector is governed by piecemeal legislative acts, resulting in confusion and conflict.
- There are clear systems for registration of pharmaceuticals, managed by the Pharmacy and Poisons Board (PPB). However, the efficiency of the registration process needs improvement.
- A pharmacovigilance system has recently been put in place at the PPB. Strategies to strengthen post-marketing surveillance are being evaluated.
- Although Kenya has published four essential medicines lists (most recently in 2010), the responsibility for managing this function has not been clearly documented. Furthermore, there are no written standard operating procedures to guide the development and maintenance of the essential medicines list (EML). The National Medicines and Therapeutics Committee (NMTC) has now been mandated to lead these processes, but it will have to be strengthened in order to perform this role effectively.
- Mechanisms are weak for promoting appropriate use of medicines, at the national level and the health facility level. Although the third edition of the national standard clinical guidelines has recently been published and Standard Clinical Guidelines (SCGs) for vertical programs exist, the mechanisms which are responsible for ensuring compliance to these SCGs, such as Medicines and Therapeutic Committees (MTCs), are either weak or not functional in most facilities and require strengthening.
- Significant gains have been made in improving the role of KEMSA (Kenya Medical Supplies Agency) in procurement for the public sector. Procurement SOPs for pre- and post-qualification of suppliers, quality control, tendering and tender evaluation are in use in KEMSA. Over 95 percent of procurements are done through competitive bidding, resulting in comparatively better prices. However, systems for supplier pre-qualification and performance tracking remain weak.
- The Medium Term Procurement Plan attempts to undertake a national quantification for essential medicines. However, this is yet to be institutionalized to make it more regular and link the same to annual procurement plans. Apart from vertical programs (TB, HIV, Malaria and Reproductive Health), there is no data for quantification at central level.
- There are variations in access to pharmaceutical services and availability of medicines; some areas, especially in rural setting, are underserved.
- There is still a significant gap in the financing of pharmaceuticals, despite the utilization of a diverse set of financing mechanisms. In public facilities, user fees are increasingly being used to procure pharmaceuticals. Out-of-pocket and house-hold expenditures contribute significantly to the total annual national expenditure on medicines.

It is encouraging to note some of the gains in the pharmaceutical sector—in particular, progress on the revision of the Kenya National Pharmaceutical Policy, the Pharmacy and Poisons Act, the review of SCGs and the Kenya Essential Medicines List (EML), and strengthening of the NMTC and the delegation of procurement functions to KEMSA. These will provide a strong governance pillar to support pharmaceutical sector interventions.

HEALTH INFORMATION SYSTEM

Within Kenya, demand for high quality health information – for health sector planning, management, monitoring, and evaluation – has increased steadily over recent decades. While system design and strengthening activities have contributed to positive progress, in general, the country's health information system (HIS) currently is not sufficiently responsive or effective. The HIS is constrained by inadequate governance structures and implementation of policy and framework documents; shortages of skilled professionals at all levels of the health system; and fragmented, vertical strengthening interventions. The Division of HIS within the Ministries of Health is working to increase coordination and transparency through stakeholder alignment around a two-year HIS investment plan focusing on five key priority areas. This will eliminate the need for program specific and parallel information systems such as the ones managed by the HIV/AIDS and EPI programs, just to name a few.

Kenya's health information system (HIS) includes routine service data; census and vital statistics; surveys; surveillance; other population- and facility-based statistics and research; management statistics; and information and communication technologies (ICTs). However, across these components, integration and interoperability is limited. In addition, information feedback loops and use of information for management and decision-making is variable across health system levels and across management units. The country's File Transfer Protocol (FTP) system to transmit routine service data from lower levels to the central level lacks adequate features to facilitate analysis and use of information for decision making, and the quality of data within the system requires improvement. Information products are produced and disseminated by the Division of HIS and other stakeholders, but deficiencies in quality, timeliness, and widespread availability hamper use and relevance.

SERVICE DELIVERY

Service provision in Kenya is critically constrained by a number of elements, as discussed in the other technical modules, including human resources, finances, and medical product supplies. Generally, there are great inequalities in the availability and utilization of services in Kenya due to these constraints as evident from the 2009 Kenya Demographic Health Survey. These inequalities have negatively impacted many of the country's main health indicators, particularly maternal health. In rural areas, obstetric care, referral, and outreach services are not adequate to prevent women from delivering at home, nor are there adequate numbers of skilled birth attendants available for at-home deliveries.

The addition of the community level and the definition of the essential health package (KEHP) are two innovations to improve service delivery in Kenya. However, implementation of the community strategy has been slow, and human resources are inadequate in many areas to implement the KEHP. Since HIV/AIDS services are integrated and form part of the KEPH, they will benefit form the reforms intended to improve on service delivery.

Service provision quality is constrained by inadequate standards and lack of enforcement of existing laws. However, strides are being made to improve this situation through the distribution of a newly printed set of clinical guidelines for facilities, improvements in clinical supervision, and new policies for accreditation for private facilities and hospital reforms. Quality will continue to be hampered by the lack of accreditation for public facilities, as well as by inequalities in resource distribution (discussed above), inability to collect accurate performance data through the Health Management Information System (HMIS), and unreliable supply of medical products.

The anticipated reforms in the health sector especially the one divorcing the Ministries of health from service delivery to policy and regulation will further enhance quality of services delivery in the health sector.

1. BACKGROUND

The Republic of Kenya is located in Eastern Africa off the coast of the Indian Ocean. The country is bordered by Ethiopia, Somalia, Tanzania, Uganda, and Sudan. Approximately 580,000 km^2 in size, Kenya consists of eight provinces: Central, Coast, Eastern, Nairobi, North Eastern, Nyanza, Rift Valley, and Western. With a gross domestic product (GDP) per capita of US $763 in 2009, Kenya is considered a low-income country in the sub-Saharan African region.

Three main broad cultural groups exist in Kenya: the Bantus, the Cushites and the Nilotes. With over 42 ethnic groups within these broad cultural groups, Kenya is rich with diverse culture. Within the over 60 languages spoken throughout the country, English and Swahili are the national languages. (All statistics are from CIA 2010.)

1.1 DEMOGRAPHIC INFORMATION

The country has a population of 38,765,312 people. Nearly 80 percent of Kenya's population lives in rural areas as compared with the sub-Saharan African (SSA) average of approximately 62 percent. Table 1 provides an overview of some of the key demographic indictors in Kenya and the region.

TABLE 1. DEMOGRAPHIC INDICATORS IN KENYA, COMPARED TO THE REGIONAL AVERAGE

	Kenya	Average Value in Sub-Saharan Africa
Population, total	38,765,312	17,431,745
Population growth (annual %)	2.64	2.35
Rural Population (% of total)	78.40	61.37
Urban Population (% of total)	21.60	38.63
Population ages 0-14 (% of total)	42.76	41.49
Population ages 65 and above (% of total)	2.66	3.26

Source: Health Systems 20/20 Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).
Note: All data from WDI-2010; data are for 2008.

1.2 REPRODUCTIVE HEALTH

Kenya has a fertility rate of 4.6, which is comparable to the SSA regional average of 4.68 and the average for its income group comparator[3] at 4.66. Under-five mortality in Kenya is 74 per 1,000, better than the averages for both the region and its income group. The prevalence of underweight children under five, a measure of overall nutritional status of the population, was 16.1 percent in 2008/09 (KNBS 2010).

The contraceptive prevalence rate, an indicator of a country's capacity to provide access to reproductive health services such as family planning, was 46 percent in 2009—more than twice as high as the average of both the SSA region (19.78 percent) and the income group (19.86 percent) in 2008. However, the HIV/AIDS prevalence rate for people ages 15-49 was a high 6.3 percent in 2008/09 (KNBS

[3] The classification of countries by income group is based on the World Bank classification, which classifies member economies and all other economies with populations of more than 30,000.

2010), compared with 5.75 percent in the SSA region and 2.92 percent in the income group. This clearly poses a significant challenge to the health system in Kenya. Table 2 provides an overview of some of the key reproductive health indicators in Kenya and the region.

TABLE 2. REPRODUCTIVE HEALTH INDICATORS IN KENYA, COMPARED TO THE REGIONAL AVERAGE

	Source of Data	Kenya	Year of Data	Average Value in Sub-Saharan Africa	Year of Data
Contraceptive prevalence (% of women ages 15-49)	WDI-2010	39.3	2003	19.78	2008
	KDHS	46	2008/09	**	--
Fertility rate, total (births per woman)	WDI-2010	4.92	2008	4.68	2008
	KDHS	4.6	2008/09	**	--
Pregnant women who received 1+ antenatal care visits (%)	UNICEF	88.0	2003	80.6	2003
	KDHS	90.6	2008/09	**	--
Pregnant women who received 4+ antenatal care visits (%)	UNICEF	52.0	2003	47.86	2003
	KDHS	47.1	2008/09	**	--

Source: Health Systems 20/20 Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).

1.3 MORTALITY

Kenya's life expectancy at birth is 54 years, just slightly lower than the regional average of 55 years. The country's infant mortality rate is 52 per 1,000 live births, significantly better than the regional sub-Saharan Africa average of 76. The under-five mortality rate is 74 per 1,000 live births. Finally, the maternal mortality ratio is 488 per 100,000 births—up from 414 in 2003, but substantially lower than either the regional average (832.16) or the income group average (809) (KNBS 2010). See Annex D for a flow diagram of the prevailing health challenges in Kenya. Table 3 provides a summary of these mortality indicators in Kenya and the region.

TABLE 3. MORTALITY IN KENYA, COMPARED TO THE REGIONAL AVERAGE

	Source of Data	Kenya	Year of Data	Average Value in Sub-Saharan Africa	Year of Data
Life expectancy at birth, total (years)	WDI-2010	54.24	2008	55.14	2008
Mortality rate, infant (per 1,000 live births)	WDI-2010	80.50	2008	75.96	2008
	KDHS	52	2008/09	**	--
Mortality rate under-5 (per 1,000)	WDI-2010	127.5	2008	120.29	2008
	KDHS	74	2008/09	--	--
Maternal mortality ratio (per 100,000 births)	KDHS	488	2008/09	832.16	2005

Source: Health Systems 20/20 Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).

1.4 POLITICAL AND MACROECONOMIC ENVIRONMENT

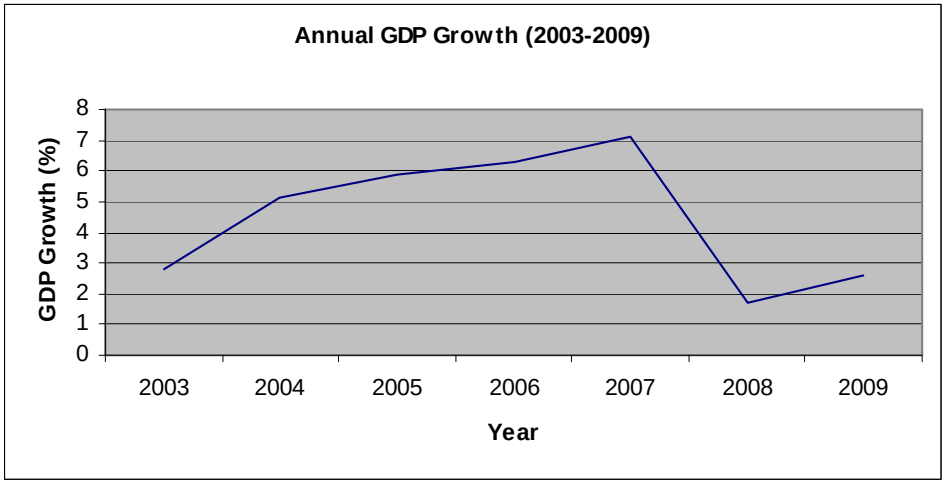
Kenya is a Republic with a unicameral National Assembly, consisting of 210 members elected to a term of five years and 12 members nominated by political parties on a proportional representation basis. Since independence, Kenya had experienced relatively stable political conditions, especially with the introduction of a multi-party democracy in the early 1990s. The 2002 elections marked a turning point in Kenyan politics, when both the Presidency and the Parliamentary majority passed from the party that had ruled since the country's independence to a coalition of new parties that promoted economic growth, education, and fighting corruption.

Between 2002 and 2006, the country experienced a series of government-linked corruption scandals that further divided the political atmosphere and led to a series of resignations. In December 2007, after elections that were plagued with irregularities, the country erupted in violence. Subsequent to the volatile 2007 elections, a power-sharing agreement was signed and a coalition government formed. A reform agenda to address the underlying causes of the post-election violence was led by Kofi Annan, focusing on constitutional, electoral, and land reform. A referendum on a proposed new constitution is scheduled for August 4, 2010, and reforms in other areas are on course.

Kenya is a center for trade and finance in the East Africa region and is considered to be one of sub-Saharan Africa's most developed economies. Seventy-five percent of Kenya's labor force works in agriculture, reflecting the large portion of the population living in rural areas, and agriculture represents 21.4 percent of GDP. The economy also includes a large service sector (62.3 percent of GDP) as well as a large variety of industries, including consumer goods, plastics, textiles, metals, oil refining, and tourism (16.3 percent of GDP). (All statistics are from CIA 2010.)

Despite its relatively diverse economy, Kenya's economic growth over the past decade has been hindered by corruption scandals, electoral violence, severe weather and droughts, and weak investment. The unemployment rate remains high at nearly 40 percent, and nearly half of country's population is living below the poverty line (CIA 2010). During President Kibaki's first term in office (2003-2007), the government adopted a series of economic reforms, along with efforts to curb corruption and resumed partnerships with the World Bank and International Monetary Fund. During this period economic growth began to improve, with GDP climbing from 2.8 percent in 2003 to 5.1 percent in 2004, 5.9 percent in 2005, 6.3 percent in 2006, and 7.1 percent in 2007 (Economic Survey, various years). Thereafter, the economic effects of the violence following the December 2007 general election, compounded by drought and the global financial crisis, brought growth down to less than 2 percent in 2008. Economic growth is now (mid-year 2010) on an upward trend, with GDP growing at 2.6 percent in 2009 (GOK 2010). (See Figure 1.)

FIGURE 1. KENYA ANNUAL GDP GROWTH



Source: World Bank, World Development Indicators.

Table 4 provides an overview of income and inequality indicators in Kenya in relation to the sub-Saharan regional averages.

TABLE 4. INCOME AND INEQUALITY INDICATORS IN KENYA, COMPARED TO SSA AVERAGES

	Kenya	Year of Data	Average Value in Sub-Saharan Africa	Year of Data	Source of Data
GDP per capita (constant 2000 US$)	453.22	2008	1,053.27	2008	WDI-2010
GDP growth ((annual %)	1.69	2008	5.16	2008	WDI-2010
Per capita total expenditure on health at international dollar rate	105.00	2006	147.78	2006	WHO
Private expenditure on health as % of total expenditure on health	39.3	2006	48.94	2006	WHO
Out-of-pocket expenditure as % of private expenditure on health	74.0	2006	78.02	2006	WHO
Gini index	47.68	2005	42.39	2005	WDI-2010

Source: Health Systems 20/20 Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).

1.5 BUSINESS ENVIRONMENT AND INVESTMENT CLIMATE

Kenya is one of Africa's most developed economies, with strong private sector activity. However, widespread corruption, counterfeit products, and high cost of doing business threaten Kenya's overall economic strength and capacity to remain competitive. Trade regulations are not considered to be transparent, and the judiciary system is perceived to be weak and subject to political influence; thus comprising the enforcement of business regulations is also seen as weak.

According to the 2010 Index of Economic Freedom, Kenya ranked 13 among the 46 countries in the sub-Saharan Africa region, with an Economic Freedom Score of 57.5 out of 100 points. The Economic Freedom score, a product of the Heritage Foundation, is an average of scores in 10 key economic areas: business freedom, trade freedom, fiscal freedom, government spending, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption, and labor freedom. Kenya's scores are highest in government spending and fiscal, monetary and business freedoms; its lowest scores are in property rights and freedom from corruption.

Since 2009, Kenya's Economic Freedom Score decreased 1.2 points, attributed to worsening trends in trade, monetary, and business freedoms (The Heritage Foundation Index of Economic Freedom, at www.heritage.org/index). Still, Kenya is known for its strong private sector and entrepreneurial activity: its relatively free business environment includes the ability to start, operate, and close a business, along with relatively strong labor regulations and protection.

1.6 TOP CAUSES OF MORBIDITY AND MORTALITY

HIV/AIDS disproportionately affects the country's mortality and morbidity. Although its prevalence is higher than the regional average, at 6.3 percent for people ages 15-49 (KNBS 2010), it is much lower than many of the Southern African countries. In addition to HIV/AIDS, tuberculosis, malaria, and diarrheal diseases are major killers. Table 5 shows the ten major causes of death and years of life lost due to disease in Kenya in 2002.

TABLE 5. MAJOR CAUSES OF DEATH, 2002

Causes	Deaths (%)	Years of Life Lost
HIV/AIDS	38	40
Lower respiratory infections	10	11
Diarrheal diseases	7	8
Tuberculosis	5	5
Malaria	5	6
Cerebrovascular disease	4	1
Ischaemic heart disase	4	1
Perinatal conditions	4	5
Road traffic accidents	2	2
Chronic obstructive pulmonary disease	2	1

Source: WHO 2002.

1.7 STRUCTURE OF THE MAIN GOVERNMENT ORGANIZATIONS INVOLVED IN HEALTH CARE

Following the formation of the coalition government in 2008, the Ministry of Health was split into two separate Ministries, the Ministry of Medical Services (MOMS) and the Ministry of Public Health and Sanitation (MOPHS). As the basis for the creation of the two ministries was entirely political, it quickly raised concerns of duplication, competition for resources, and strained political allegiances (Wamai 2009). The 2008 split adversely affected the health sector partnership arrangements, which were steadily gaining momentum (see the governance section for additional information). Table 6 shows a side-by-side comparison of the core functions and responsibilities of the two Ministries.

TABLE 6. KENYA HEALTH MINISTRIES' KEY FUNCTIONS AND RESPONSIBILITIES

Ministry of Medical Services	Ministry of Public Health & Sanitation
Medical services policy	Public health and sanitation policy
Curative services	Preventive and promotive health services
HIV/AIDS and other sexually transmitted infections (STI) treatment and management	Community health services
Maternal services	Health education
Rural medical services	Reproductive health
Clinics and hospitals	Food quality and hygiene
Registration of doctors and paramedics	Health inspection and other public health services
Nurses and midwives	Quarantine administration
National Hospital Insurance Fund	Oversight of all sanitation services
Clinical laboratory services	Preventive health program including vector control
Kenya Medical Training College (KMTC)	National public health laboratories
Kenya Medical Supplies Agency (KEMSA)	Government pharmacist
Regulatory bodies for pharmacy and medicine	Dispensaries and health centers of Kenya Medical Research Institute (KEMRI)
Member of KEMRI board	Radiation Protection Board
	Member of KEMSA Board
	Member of Kenya Medical Training College (KMTC) Board

Source: MOMS 2008c, MOPHS 2008.

1.8 PLANNING AND POLICY FORMULATION

In the face of declining health indicators and widespread poverty, in 2007 Kenya established a new national development agenda entitled *Vision 2030*, outlining the government's long-term development goals for the country. The Vision aims to transform Kenya into a new industrialized, middle-income country providing a high quality of life to all its citizens in a clean and secure environment. The health sector is an important aspect of the Vision, to support a healthy workforce necessary to increase labor productivity and global economic standing.

Within the health sector, the *Kenya Health Policy Framework* has been the basis for the health development agenda in Kenya since 1994. The framework emphasizes "quality health care that is acceptable, affordable and accessible to all." The implementation of this framework was divided into two five-year strategic plans: the National Health Sector Strategic Plan I (MOH 1999) and the National Health Sector Strategic Plan II (MOH 2005).

National Health Sector Strategic Plan I (NHSSP I, 1999-2004). The objectives of the NHSSP were to:

- Strengthen governance
- Improve resource allocation
- Decentralize health services and management
- Shift resources from curative to preventive and PHC services
- Provide autonomy to provincial and national hospitals
- Enhance collaboration with stakeholders under a SWAp modality

National Health Sector Strategic Plan II (NHSSP II, 2005 – 2010). NHSSP II was designed to reduce health inequalities and to reverse the downward trend in health related impact and outcome indicators that had been noted during the implementation of the NHSSP I. Its strategic objectives were to:

- Increase equitable access to health services
- Improve quality and the responsiveness of services in the sector
- Improve the efficiency and effectiveness of service delivery
- Foster partnerships in improving health.

Key innovations of the NHSSP II include the definition of the Kenya Essential Package for Health (KEPH) and the inclusion of the community level as part of the service delivery units (MOH 2005). Both of Kenya's Health Ministries (MOMS and MOPHS) respond to the expectations outlined in the NHSSP II in their respective areas of responsibility (MOMS 2008c, MOPHS 2008).

NHSSP II outlines an annual planning and monitoring cycle that adheres to the "Three Ones" principle: one plan and budget, one monitoring system, and one coordinating framework (MOH 2005). Further detail is provided in the M&E of the Health Sector Performance Framework and Action Plan, which sets

forth a monitoring, review, and evaluation schedule for the three-year Joint Program of Work to implement the Kenya Essential Package for Health (KEPH), as follows:

- Monthly monitoring at all facilities/service delivery points, both public and private, focusing on the inputs and outputs of Annual Operational Plans (AOPs) to address quality, coverage, supply needs, and refinement of the AOP
- Quarterly monitoring at District, Province, and National program management levels, both public and private, focusing on the inputs and outputs of AOPs to address quality, coverage, supply needs, refinement of the AOPs, and supervision
- Joint Annual Review at all levels, both public and private, focusing on outputs, outcomes, and achievement of targets to address quality, coverage, and supply needs, plan the AOPs, including target setting and allocation of financial and human resources, and to analyze overall sector performance towards the longer-term goals of the Joint Program of Work and NHSSP II
- Joint evaluation at the National level every three years to prepare the Joint Program of Work, including allocation of financial and human resources, and to inform policy development overall sector planning

In early 2010 it was decided to extend the NHSSP II to 2012 in order to align it to the government planning cycles.[4]

Health policy changes are preceded by studies that influence future policy directions. These studies and changes could be targeted towards specific programmatic areas (e.g., malaria, TB, HIV, reproductive health, child health), or towards general sector issues (e.g., strategic plan reviews both at midterm and end term, Public Expenditure Tracking Surveys, client satisfaction surveys). Specific policy-review committees assess key sectors related to the social determinants of health. In addition there are standing committees that liaise with the parliamentary committees on health, to bring the health agenda to the legislative assembly. The Joint Interagency Coordinating Committee (JICC) is the country's coordination mechanism for the health sector. It provides a variety of critical advisory, liaison and oversight functions, including advising the government and its health partners on health policy matters. The JICC is informed by technical and system support working groups for key system priority areas (HSS, HIV, TB, etc.), called Interagency Coordinating Committees (ICCs).

1.9 HEALTH SYSTEMS STRENGTHENING CAPACITY

The success of health systems strengthening (HSS) activities depends to some extent on the capacity of the implementing organizations. Without local sources of technical assistance, health systems strengthening efforts will rely on international sources of technical assistance, raising costs and limiting local ownership of these initiatives. HSS capacity also influences how fast interventions can be implemented.

Table 7 presents a framework of the organizations involved in HSS, with a rough assessment of their capacity. This provides an overall picture of the country's ability to take responsibility for strengthening the health system.

[4] Personal communication with MOMS and MOPHS.

TABLE 7. ORGANIZATIONS INVOLVED IN HEALTH SYSTEM STRENGTHENING

Role and Function	Organization	Capacity
Leadership to set policy direction, align stakeholders with the direction, mobilize resources, set standards, and monitor implementation	Ministries of Health (especially planning department), professional organizations	Within the Ministries of Health, HSS is vested in various committees and coordinated by the Health Systems ICC. Although the ICCs have a high profiles in the Ministry, some of committees lack workplans to guide their operation and their activities depend on how active the chairperson is, putting their operations at risk in the event the chair gets transferred or is absent.
Research to provide the evidence to guide health system changes	Research institutions (e.g., universities, IPAR, KIPRA, APHRC[5])	Due to minimal interaction with the health sector, this work remains to a large extent academic and is not disseminated for policy advocacy.
Technical assistance to address specific problems	Consulting firms, NGOs, and universities	Well trained personnel, working with local and international resources, are capable of providing technical assistance in all the six building blocks.
Training to develop professionals with expertise in strengthening health systems.	Training institutions (e.g., universities)	Training in health systems is relatively new. A few universities offer one or two modules (Master's level), but none offers a comprehensive health systems strengthening package.
Advocacy organizations to build support and hold government accountable	NGOs, civil society, Parliament	No capacity exists, since the focus has been on service delivery rather than health systems. The HSS ICC is likely to increase focus on health system issues.
Standard-setting	Professional organizations, Ministries of Health	There exist clear and well-disseminated standards and guidelines for clinical care, provider qualifications, and licensure, as well as accreditation of training institutions.

1.10 DECENTRALIZATION

Health system decisions in Kenya have, traditionally, been taken at the central level of the government, through top-down decision-making and resource allocation, despite efforts to take development planning to the district level. Centralized health systems have been criticized for regional and provincial discrepancies in the health service distribution, disparities in resource allocations, and inequitable access to quality health services. Over the past decade, Kenya has committed to reforms to decentralize the country's health management system, to increase decision-making power for resource allocation and service delivery at the district and facility levels and to allow for greater community involvement in health management. Through gradual reforms outlined in the two Health Sector Strategic Plans, District Health Management Boards and District Health Management Teams (DHMTs) have taken on responsibilities for facility-level operations within their districts (Ndayi et al. 2009).

The 2004 Kenya Service Provision Assessment Survey examined the effectiveness of this evolving decentralization strategy. A special module of the assessment examined how well the district health management teams were meeting standards in the following areas: governance and management; human resource development and management; commodity management; infrastructure development; health care financing, budget and management; and performance monitoring. The results were varying but showed that most DHMTs did hold regular meetings. However, the lack of existing guidelines for the DHMTs made it difficult to compare their compliance or performance. Other major findings indicated a

[5] IPAR is the Institute of Policy Analysis and Research, KIPRA is the Kenya Institute for Public Policy Research and Analysis, and APHRC is the African Population and Health Research Center.

lack of funds and transport to meet supervision targets, a need for training district health committees, and—despite support from government and external sources—inadequate funding for medicines, equipment, and building maintenance. However, the survey also showed that most districts did have a documented supervision plan that prioritized professional development and training. (NCAPD 2005)

Table 8 provides an assessment of the level of government decentralization in Kenya for core health systems functions, service delivery and project implementation, operation maintenance, and information management.

TABLE 8. LEVEL OF GOVERNMENT DECENTRALIZATION

Health System Functions	Level of Government		
	National	Subnational (Provincial)	Local Level (District)
Financing			
Revenue generation and sources	xxxx	x	xxx
Budgeting, revenue allocation	xxxx	x	xxxx
Expenditure management and accounting	xxxx	xx	xxxx
Financial audit	xxxx	x	xxxx
Human Resources			
Staffing (planning, hiring, firing, evaluation)	xxxx	xx	xxxx
Contracts	xxxx	x	x
Salaries and benefits	xxxx	x	x
Training	xxxx	x	x
Service Delivery and Program or Project Implementation			
Hospital and facility management	x	xxxx	xxxx
Defining service packages	xxxx	x	x
Targeting service delivery to specific populations	xxxx	xxx	x
Setting norms, standards, regulation	xxxx	x	x
Monitoring and oversight of service providers	xxxx	xxx	xx
User participation	x	xx	xx
Managing insurance schemes	xxxx	x	x
Contracting	xxxx	x	x
Payment mechanisms	xxxx	x	x
Operation Maintenance			
Medicines and supplies (ordering, payment, inventory)	xxxx	xx	xxx
Vehicles and equipment	xxxx	x	xxxx
Facilities and infrastructure	xxxx	xxx	xx
Information Management			
Health information systems design	xxxx	x	x
Data collection, processing, and analysis	xxxx	xx	xx
Dissemination of information to various stakeholders	xxxx	x	x

Note: xxxx = Extensive; xxx = Some; xx = Limited; x = No responsibilities

1.11 SERVICE DELIVERY ORGANIZATION

Kenya's health management system consists of eight administrative provinces, divided into districts. Under the country's new decentralization strategy, districts are responsible for delivering health services and implementing health programs and are considered to be the central element of the public health system (Wamai 2009). At the provincial level, management responsibilities are split between the

Provincial Health Management Team (PHMT, part of the MOPHS) and the Provincial Medical Services Management Team (PMSMT, part of the MOMS). Under the split-ministry structure, the MOMS is responsible for service delivery levels 4-6, and the MOPHS is responsible for levels 1-3.

The PHMT is headed by the Provincial Director of Public Health and Sanitation. In line with the scope of the MOPHS, all primary health services fall within the core functions of the PHMT and its subsidiary District Health Management Teams (DHMTs).

The PMSMT is housed at the provincial general hospital of the province and is headed by the Provincial Director of Medical Services. The PMSMT focuses on curative services, provided under the MOMS (generally levels 4-6). The MOMS personnel includes the medical services officers, health records officers, nursing officers, pharmacists, and health administration officers at both provincial and district levels.

The country's service delivery system infrastructure includes the national teaching and referral hospitals (Kenyatta and Moi), provincial hospitals, district and sub-district hospitals, health centers and dispensaries. The private sector delivers approximately one-third of the outpatient care and 14% of inpatient care in the country (GOK 2009a). Table 9 gives a breakdown of public and private facilities and human resources, in various categories.

TABLE 9. SERVICE DELIVERY SYSTEM: FACILITIES AND HUMAN RESOURCES

Type of Service	Public	Private[6]				Total
		For-profit	Not-for-profit, NGO or Unknown	FBO	Total Private	
Facilities*						
Tertiary Hospitals (level 6)	4	0	0	0	0	4
Secondary Hospitals (level 5)	10	0	0	0	0	10
Primary Hospitals (level 4)	225	12	5	23	40	265
Other Hospitals (level 4)	22	41	59	52	152	174
Health Centers (level 3)	473	21	88	139	248	721
Dispensaries (level 2)	2393	74	380	509	963	3356
Nursing Homes (level 3)	3	89	54	9	152	155
Clinics (level 2)	20	1126	693	102	1921	1941
Laboratory – Stand alone	0	52	2	0	52	52
Stand-alone VCT clinics	7	2	29	7	38	45
Dental Clinics	0	10	1	0	11	9
Registered Medical Personnel**						
Doctors	1,715	5,182				6,897
Clinical Officers	2,116	3,772				5,888
Nurses	14,958	32,907				47,865
Pharmacists/Pharmaceutical Technologists	652	4,219				4,871
Public health Officers/Public Health Technicians	4,027	9,134				13,161

*Source: MOMS & MOPHS 2010e.

**Source: GOK 2010 and MOMS & MOPHS 2010g.

[6] Includes FBOs.

1.12 DONOR COORDINATION

Coordination of donors occurs at two levels: through bilateral negotiations, and through individual donor participation in the JICC, HSCC, and the health sector review process. Donors also must disclose their contribution to the health sector, whether on or off budget, during the Medium Term Expenditure Framework (MTEF)(shadow budgeting process) and preparation of the Annual Operational Plan (AOP), to facilitate the government's identification of underfunded interventions.

In 2007, stakeholders in the health sector, including donors, signed the SWAp Code of Conduct. Since then, participating partners have made deliberate efforts to deliver on commitments, including implementing the NHSSP II through AOPs. However, there is still much room for improvement, as donor support is still largely project-oriented; most partners have not contributed to direct budget support.[7]

The development partner coordination structure called the Development Partners in Health Kenya (DPHK), with 15 members, is a significant milestone towards alignment and use of country systems by Development Partners, in line with the Paris declaration. The group communicates with the Ministries directly on behalf of the development partners and it is envisioned that this approach will help to minimize the transaction costs for Government in dealing with the donors and their agencies[8].

The arrangement has improved information sharing among development partners and the Ministry. During the time of the assessment, documents were being made available to all donor partners and the Ministries via a donor partner website, mapping donor priorities, activities and funding in-country. This year, for the first time, donor commitments will be reviewed against expenditures as a group.

1.13 DONOR MAPPING

Table 10 provides an overview of the main sources of external health assistance. (Note: this table does not include Global Fund resources.)

TABLE 10. SUMMARY OF EXTERNAL HEALTH ASSISTANCE

Agency	Programme	Currency	2008/09 Planned	2008/09 Actual	Implementing Partner	Focus Area	Source
GDC	GTZ Health Sector Programme	EUR	2,500,000	2,800,000	MOPHS, MOG, IPs	RH, GBV	DPHK
	KfW OBA Voucher Programme	EUR	1,200,000	2,083,000	NCAPD	RH	
	KfW Family Planning	EUR	3,500,000	2,183,000	MOPHS	FP	
	KfW Development	EUR	5,000,000	1,554,000	NCAPD, MOPHS	FP, OBA	
	DED HIV-AIDS/ GBV	EUR	500,000	500,000	GOK, NGOs	HIV-AIDS, GBV	
	InWENT HIV/AIDS; pro-poor structures; leadership; hosp reforms	EUR	1,100,000	300,000			

[7] Key informant interviews.
[8] DPHK website www.hdwg-kenya.com (accessed May 27, 2010).

Agency	Programme	Currency	2008/09 Planned	2008/09 Actual	Implementing Partner	Focus Area	Source
UNFPA	Projects through NGOs	USD	1,236,782	1,236,782	IPs	SRH/ FP/ HIV&AIDS/ GBV	COC report
	MOH programmes	USD	1,271,913	1,271,913	MOH	SRH/FP/ HIV&AIDS/ GBV	
		USD	3,000,000	3,000,000	MOH	SRH/FP/ HIV&AIDS/ GBV	
UNICEF	Vaccine procurement	USD	300,000	2,055,673	GAVI, MOPHS		MTEF 08-09
	Child health	USD	1,200,000	1,241,225	MOPHS		
	Health promotion	USD	1,000,000	676,278			
	Nutirtion	USD	500,000	344,034			
	Reproductive health	USD	1,000,000	314,382			
	PMCT and Pediatric ART	USD		347,098	NSCOP/MOPHS		
USG[9]	PEPFAR	USD	374,356,000	299,485,000	MOMS, MOPHS, Peace Corps, CDC, APHIA IPs	HIV/AIDS	DPHK
	MALARIA (PMI)	USD	13,887,000	11,109,000		Malaria	
	RH / FP	USD	9,240,000	7,392,000		RH/FP	
	TB	USD	2,013,000	1,611,000		TB	
WFP	Total (school meals, relief and recovery, refugee food support)	USD	26,984,697	29,984,697	GOK	Nutrition/ food support	COC report
WHO	Total for health	USD	5,947,000	18,812,843			COC report
DANIDA	Health Sector Support	Ksh	1,039,200,000		MOMS		MOMS
AfDB	Rural Health Project	Ksh	81,400,000		MOMS		MOMS
SIDA	Integrated Land and Urban Sector	Ksh	178,500,000		MOMS		MOMS

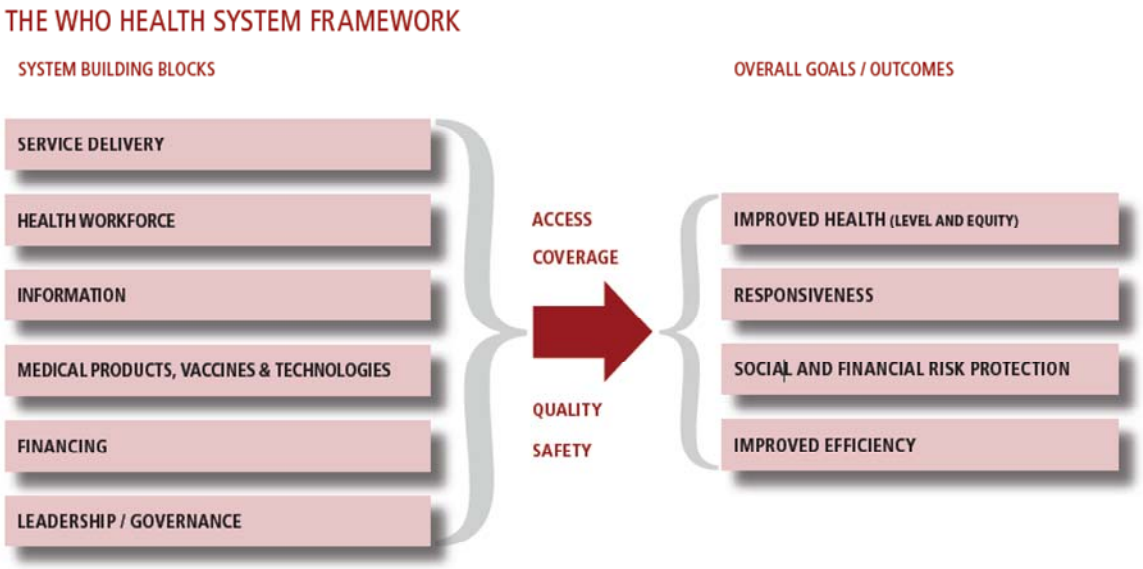
[9] USG resources are used in such a way that 35% of total funding is used in regional service delivery and 65% is used at the national level. 64% of the resources at the national level is used for commodities and 36% for support to issues of policy, national BCC activities etc. The figures shared are direct costs to the field.

2. METHODOLOGY

2.1 FRAMEWORK FOR THE HEALTH SYSTEMS ASSESSMENT APPROACH

The assessment was adapted from USAID's *Health Systems Assessment Approach: A How-To Manual* (Islam 2007), the use of which has been documented in 17 developing countries, to date. The Health System Assessment Approach is based in turn on the World Health Organization's health systems framework of the six health system building blocks (WHO 2000, 2007) (Figure 2). The assessment methodology consists of an analysis of the country's performance according to a set of internationally recognized indicators, carried out through a review of available literature and statistics, key informant interviews, and field visits to confirm findings.

FIGURE 2. WHO HEALTH SYSTEMS FRAMEWORK



Source: WHO 2007.

As a rapid assessment, the team does not collect any primary quantitative data. Rather, the team consolidates and analyzes the available data across all components of the health system, to assess how the health system is performing as a whole and to identify obstacles and opportunities that cut across multiple health system components. Key informant interviews and health facility visits are carried out to confirm findings from secondary data.

This approach was adapted in early 2010, in coordination with the health ministries, to meet the specific expectations of the health ministries in Kenya. The Kenya HSA process description is included as Annex A.

2.2 THE TEAM

The Kenya HSA resulted from a request by the two Ministries of Health in Kenya, and the assessment team included participants from each ministry. The team consisted of:

- Ministry of Medical Services senior representative
- Ministry of Public Health and Sanitation senior representative
- Health Systems 20/20 team leader and human resources for health module lead
- Health Systems 20/20 HSA coordinator and service delivery module lead
- Health Systems 20/20 governance module lead (Kenyan consultant)
- Health Systems 20/20 health finance module lead (Kenyan consultant)
- USAID/Washington health information systems module lead
- Strengthening Pharmaceutical Systems Project (Kenya) medical products management module leads (3)

2.3 PHASE 1: DOCUMENT REVIEW AND INTERVIEWS

The first phase of the Kenya assessment consisted of desk research. The team identified background documents and statistics about Kenya generally and the health system specifically, via internet research as well as recommendations from Health Systems 20/20 consultants in Kenya, contacts at the health ministries, USAID/Kenya, and key informants contacted prior to the visit to Kenya. (See reference list.)

The team held multiple conference calls with the health ministries and health partners to identify key informants at the national level, to identify priority areas of interest, and to select sites for visits. After an initial round of key informants was identified, team members from the health ministries assisted in setting up meetings.

2.4 PHASE 2: NATIONAL-LEVEL KEY INFORMANT INTERVIEWS

Over the course of 13 days, the in-country assessment team interviewed numerous stakeholders at the national level. Interviewees included representatives of donor organizations, professional organizations, health training institutions, faith-based and NGO representative organizations, and many professionals from both health ministries. (See the list of site visits and interviewees, Annexes B and C.) Responses were recorded by the interviewers and examined for identification of patterns across stakeholders.

2.5 PHASE 3: FIELD VISITS

The team split into three teams in order to visit three representative provinces: Coast, Northeast, and Rift Valley. Each team visited PHMTs, DHMTs, DMOHs, District Hospitals, Health Centers, and Dispensaries. Teams met with health management team members at the PHMTs and DHMTs. At District Hospitals the teams met with healthcare providers as well as senior management. At Health Centers and Dispensaries, team members met with healthcare providers as well as Facility Health Committee members.

Each team member summarized findings for his/her assigned modules. Together the team summarized the results, highlighting key findings across health system performance indicators and developing

recommendations. Preliminary findings and recommendations were presented to the Ministries of Health.

2.6 PHASE 4: REPORT WRITING

The findings of the team have been compiled in this report. After each team member wrote a module, the compiled report was reviewed and edited by the team leader and the HSA coordinator. Additional information and changes were submitted by individual writers and team members from the health ministries. A second draft was reviewed by a wider group consisting of Health Systems 20/20 senior management and technical experts, staff members from the ministries of health and USAID/Washington. The resulting third draft was submitted for approval to senior officials of the ministries of health.

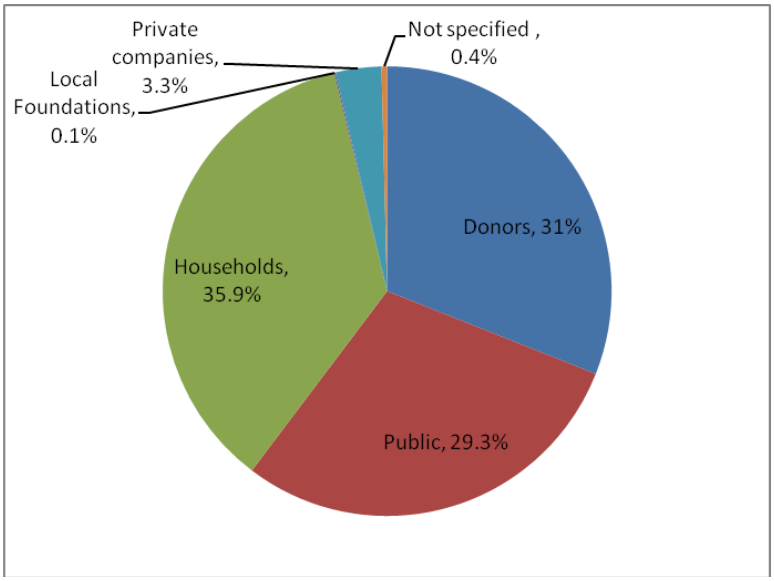
3. HEALTH FINANCING

This section presents an analysis of the health care financing module on the basis of five key elements of the health care financing system: revenue collection; pooling and allocation of financial resources (government budget formation and allocation and health insurance); purchasing and provider payment; and institutional capacity building for financial functions. Each element is assessed using a number of indicators.

3.1 REVENUE COLLECTION: AMOUNT AND SOURCES OF FINANCIAL RESOURCES

The health sector in Kenya continues to be financed from three primary sources: public, private including households (consumers), and donors. According to the 2005/06 National Health Accounts (NHA), the total health expenditure in Kenya was equivalent to about 4.8 percent of GDP at current market prices, which translates to per capita health spending of approximately Ksh 1,987 ($27) (GOK 2009b).[10] Households remain the largest contributors of health funds, at 35.9 percent, followed by the government, and then donors, who contribute approximately 30 percent. Figure 3 shows the breakdown of health expenditure by source.

FIGURE 3. BREAKDOWN OF TOTAL HEALTH EXPENDITURE BY FINANCING SOURCE



Government expenditure on health is estimated at 6.0 percent of total government expenditures in 2008/09. The per capita government expenditure of US$27 falls below the targets set by the Abuja Declaration and by WHO (GOK 2010).

[10] All dollar figures are USD.

Kenya is especially dependent on donors for the financing of key program areas, such as HIV/AIDS. HIV/AIDS is more dependent on external funding than any other program, at 75 percent (NACC 2008). This over-reliance on external resources is now threatening the sustainability of programs; there is now a realization that, unless additional domestic resources are mobilized, health service delivery will be compromised (GOK & Health Systems 20/20 2010). Moreover, 60 percent of donor funding to the health sector is passed through NGOs who have high administration costs, raising the issue of efficiency in use of resources as well as the commitment of donors to moving towards using country systems, in line with the Paris Declaration and the health sector Code of Conduct.

The low level of expenditure on health by the government prevails despite its commitment to prioritize health in the Economic Recovery Strategy and Vision 2030. This compromises the quality of care in the public sector, evident in the shortage of medical supplies, inadequate human resources, and poorly maintained infrastructure. Although private spending (including out-of-pocket (OOP) expenditures) declined between 2001/2 and 2005/6, treatment costs continue to limit access to care especially by the poor. It is estimated that 16 percent of the sick do not seek care due to financial barriers, while 38 percent must dispose their assets or borrow to pay for medical bills (GOK 2009a). Because of the need to pay directly for health services at the point of consumption, 4.1 percent of households face catastrophic expenditures (2.7 percent of non-poor and 7.7 percent of poor households); 1.5 percent of households were pushed below the poverty line (Xu et al. 2005). This adverse outcome in turn slows the pace of achieving the Millennium Development Goals (MDGs). Table 11 provides a summary of Kenya's health financing indicators.

TABLE 11. HEALTH FINANCING INDICATORS

Indicator	Value
Total expenditure on health as % of GDP (2005/06)	4.8%
Per capita total health expenditure, at average exchange rate USD (2005/06)	27
Government expenditure on health as % of total government expenditure (2008/09)	6.0%
Public (government) spending on health as % of total health expenditure (2005/06)	29.3%
Donor spending on health as % of total health spending (2005/06)	31%
Out-of-pocket spending as % of total expenditure on health (fees for service, medicines, co-payments, deductibles) (2005/06)	29.1%
Private spending (out-of-pocket, private health insurances, NGOs, firms) on health as % of total health spending (2005/06)	39.3%

In order to minimize financial barriers to accessing health and reduce dependency on donors, the ministries of health, in collaboration with other stakeholders, are in the process of developing a health financing strategy that would define a long-term, fiscally sustainable, equitable, and efficient approach to financing health services in Kenya. The health financing strategy will include a coordinating framework for all existing financing mechanisms. Strategy objective include: universal coverage achieved in a realistic timeframe; efficient and effective provision of quality health care; and good governance based on fiscal and economic affordability.

In the short/medium term, options are being examined for increasing National Hospital Insurance Fund (NHIF) capacity as an "active purchaser" of health services. The outpatient cover currently being piloted is one of the initiatives towards this end. The proposed increase in NHIF contribution, to take effect in July 2010, will increase benefits with the aim of providing comprehensive care to its members.

3.2 FINANCING OF HIV/AIDS

Kenya faces significant challenges in funding its program to provide expanded HIV/AIDS services to HIV-positive individuals in need. The Kenya National AIDS Strategic Plan 2009-10 to 2012-13, or KNASP-3,

is a comprehensive vision that outlines the resources needed and the resources available. Based on this gap analysis, 58% of the funding shortfall derives from treatment and care. Significantly, over 75% of the resources used to finance the current strategy are derived externally; and the Government of Kenya is energized to progressively increase domestic and sustainable resources. While being mindful of such financing issues, Kenya must also continue to improve and scale-up its national strategy for treatment and care, even as new program information indicates new priorities. This is important given the social responsibility to improve health outcomes for the people living with HIV/AIDS requiring care and treatment, many of whom are not currently reached with services.

Recognizing that development partner resources for HIV/AIDS will be reduced starting in 2011/12, the Government of Kenya, through the NACC, set up a steering committee to explore alternative modalities of financing HIV/AIDS through mobilization of domestic resources. Three innovative approaches were identified, including: increasing central government allocation to the health sector to meet the Abuja targets, introducing a levy on airline traffic, and covering ART treatment through the NHIF. In addition, decentralizing services in order to increase coverage and provide the same services in a more cost effective manner is under discussion as a means of sustaining the HIV/AIDS program. A report on sustainability of HIV/AIDS programs in Kenya has been prepared and will form the basis of a Cabinet Paper to guide decision of the best option of raising domestic resources for HIV/AIDS without distorting the county's macro-economic framework (GOK & Health Systems 20/20 2010).

Treatment and care constitute the largest financing gap in the KNASP III and is being used an entry point for mobilizing domestic resources for HIV/AIDS. Already, the government has allocated Ksh 900 million or US$ 11.3 million for ARVs in the 2010/11 financial year.

3.3 POOLING AND ALLOCATION OF FINANCIAL RESOURCES: GOVERNMENT BUDGET FORMULATION AND ALLOCATION

The ministries of health continue to spend a large portion of their allocation, 71 percent, on recurrent costs including salaries, and 68 percent spent on outpatient/inpatient care services (mostly in large secondary and tertiary hospitals). The two tertiary hospitals, Kenyatta and Moi, consume 16 percent of the ministries' recurrent budgets (GOK 2009d). This leaves very little for capital development, as reflected in low investment in expansion of health facilities and replacement of aging buildings and equipment, resulting in dilapidated infrastructure across all levels.

- Percent of government health budget spent on outpatient/inpatient care in 2008/09: 68 percent
- Percent of government health budget allocation in rural vs. urban areas: 60 percent
- Percent of government health budget spent on health worker salaries, training, medicines and supplies, other recurrent costs in 2008/09: 71 percent

The biggest challenge regarding the financing flow in the health sector is ensuring the funds reach the intended beneficiaries. The past two Public Expenditure Tracking Surveys revealed a wide disparity between the funding allocated to rural health facilities and the amount reaching the intended beneficiaries. The Public Expenditure Tracking Surveys estimated that only about 44 percent of funds (including commodities) reach the lower level facilities. This prompted the health ministries to start delivering medical supplies directly to lower level facilities and commit to a new policy of funding health facilities directly, bypassing the long bureaucratic disbursement process.

After a successful pilot in Coast province, the public health sector is committed to a new policy of funding health facilities directly, based on the gazettement of the Health Sector Service Fund (HSSF) and the Hospital Management Services Fund (HMSF), both scheduled to be rolled out in July 2010. Although a lot of work has been done to operationalize the HSSF Funds, fund management still needs to be developed. There is minimal progress so far in reviewing the Public Health Act to make health facilities accounting units, which would greatly improve the accounting processes. Also, the District Health Management Teams (DHMTs) who will play a key role in management of these funds are yet to be trained; and in turn, training will need to cascade to lower level facilities.

3.3.1 MINISTRY OF HEALTH BUDGET TRENDS

The health ministries' expenditures over the last five years have grown (in nominal value) from Ksh 19 billion to Ksh 32 billion, as shown in Table 12, representing an overall growth of 68 percent and an average annual growth of 18.4 percent, and exceeding the average inflation of 11.1 percent over the same period. However, 2007/8 represented a temporary decrease, with the allocations to the health ministries declining by 27 percent and then increasing by 24 percent the following year.

The expenditure by the ministries of health as a percent of Government of Kenya (GOK) expenditures remains low at 6.0 percent in 2008/09—almost eight years after the government committed itself to increase this ratio to 15 percent by signing the Abuja Declaration. The total health ministry expenditures as a percent of GDP has oscillated between 1.4 percent and 1.7 percent over the last five years. (See Table 12.)

TABLE 12. TOTAL GOVERNMENT ALLOCATIONS ON HEALTH, 2004/05-2008/09

Description	2004/05	2005/06	2006/07	2007/08	2008/09
Recurrent (KSh. million)	17,417	19,765	23,437	20,429	27,631
Development (KSh. million)	1,741	3,242	12,884	6,136	5,313
Total (KSh. million)	19,158	23,007	36,321	26,565	32,944
Annual growth of MoH expenditures	17%	21%	57%	-27%	24%
Total health ministries expenditures as a percent of GOK expenditures	6.1%	5.7%	7.6%	6.4%	6.0%
Total health ministries expenditures as a percent of GDP	1.6%	1.5%	1.5%	1.7%	1.4%

Source: (MOMS 2008a).

3.3.2 MOH BUDGET TRENDS: AUTHORIZED/ PLANNED AND ACTUAL EXPENDITURES

Table 13 indicates that the overall health ministries recurrent budget performance (actual expenditure as a percentage of approved budget) averaged almost 94 percent; in contrast, development expenditures averaged just 52 percent of approved budget. About 75 percent of the development budget is externally financed. The low absorption rate, especially of development funds, reduces the ministries' justification for additional funds requested from development partners (though the rate increased in the past year to 92 percent). This issue emerges whenever the country submits applications for consideration to the Global Fund.

TABLE 13. COMPARISON OF ACTUAL EXPENDITURE AND APPROVED BUDGET

	2006/07	2007/08	2008/09
Recurrent budget (million Ksh)	23,437	20,429	27,631
Recurrent reported actual (million Ksh)	21,539	20,207	26,927
Actual as % of recurrent budget	92%	99%	98%
Development budget (million Ksh)	12,884	6,136	5,313
Development reported actual (million Ksh)	5,050	1,460	4,870
Actual as % of development budget	39%	24%	92%

3.3.3 PROCESS OF BUDGET FORMULATION AND ITS MISALIGNMENT TO THE MTEF

The annual planning and budgeting process in the ministries of health begins in September, with an extensive internal and external review. These reviews look at the broad performance of the health sector in the last fiscal year (FY) and identify key issues and priorities for consideration in the Annual Operational Plan (AOP) for the following FY. The findings of the review process, along with the ministries' plans, Public Expenditure Reviews, and Public Expenditure Tracking Surveys, are presented to the Ministry of Finance and other stakeholders at the national level, but due to time constraints they are not widely disseminated to the districts. The ministries of health are not well positioned to influence the Budget Outlook Paper which the Ministry of Finance and Cabinet finalize by end of November, effectively locking in the resource allocation to the Human Resource sector (health and education ministries).

The ministries of health begin the bottom-up district planning process in February with the District Health Stakeholders Forum. The ministries of health and district health officials finalize the AOP in April, addressing resource gaps, and the AOP is approved in a Health Review Summit in June. Unfortunately, the final AOP is too late to influence the second budgeting "window" in December, when the Sector Working Group for Human Resources conducts the resource bidding process among its ministry members (health and education). In addition, the AOPs are not presented to districts for alignment with resources available for the next FY. This means that implementing entities have to adjust their budget and targets during the implementation process. For example, a district will be forced to spend less for operations and maintenance than they proposed in their AOP because the AOP did not inform the budget allocation to the ministries of health.

The failure to harmonize the AOP with the MTEF calendar, and to use the AOP in the resource bidding process, has contributed to under-funding in the health sector. The persistent under-funding of AOPs creates fatigue in the planning process, especially in the districts, and stakeholders are agitating for change, including harmonizing the process with the MTEF (Muchiri 2010).

3.3.4 MINISTRIES OF HEALTH BUDGETARY ALLOCATION STRUCTURE

The allocations to the ministries of health are in two "votes": recurrent and development. The recurrent vote finances expenditures which are routine in nature, while the development vote finances capital formation, including buildings and equipment. However, there is increasingly a tendency for the development vote to finance recurrent expenditures, especially for items financed by development partners.

Each vote is subdivided into four categories or program areas, each in turn divided into heads (parts of the program). The heads are further divided into sub-heads which are disaggregated into functional expenditure items.

Table 14 shows an example of the ministries of health budget structure. This budgeting structure is limiting since it is not linked to programs, outputs, and activities as defined in the health sector strategic plans. Past efforts to harmonize the budget structure with the sector plans has been hampered by the Ministry of Finance requirement to have one budget framework across the entire public sector. As the health sector moves towards performance/output based budgeting, it's important that a review of the budget structure be considered.

TABLE 14. MINISTRIES OF HEALTH BUDGET STRUCTURE EXAMPLE

Sub-vote			
113: Rural Health Services	**Head**		
	335: Rural Health Centers and Dispensaries	**Sub-head**	
		010: Reproductive health	**Items**
			2211000: Specialized Materials and Supplies

3.3.5 CENTRAL AND LOCAL COUNCILS BUDGET ALLOCATIONS FOR HEALTH IN DECENTRALIZED SYSTEMS

Local authorities are delegated by the Minister of Health to provide health services to their residents. To date, five municipalities offer health services to residents: Nairobi, Kisumu, Mombasa, Eldoret, and Nakuru. Except for Nairobi, which has a maternity hospital, all the other municipalities have only a chain of health centers and dispensaries. These services are financed through a combination of council revenues and user fees. The municipality expenditure on health accounts for 0.4 percent of total health expenditure (GOK 2009b). This low level of expenditure and the rising demand for health services has prompted the ministries of health to intervene by providing medical supplies and seconded staff to the municipal clinics, with the dual objective of decongesting tertiary and secondary public facilities by encouraging use of nearby, cost-effective lower level facilities.

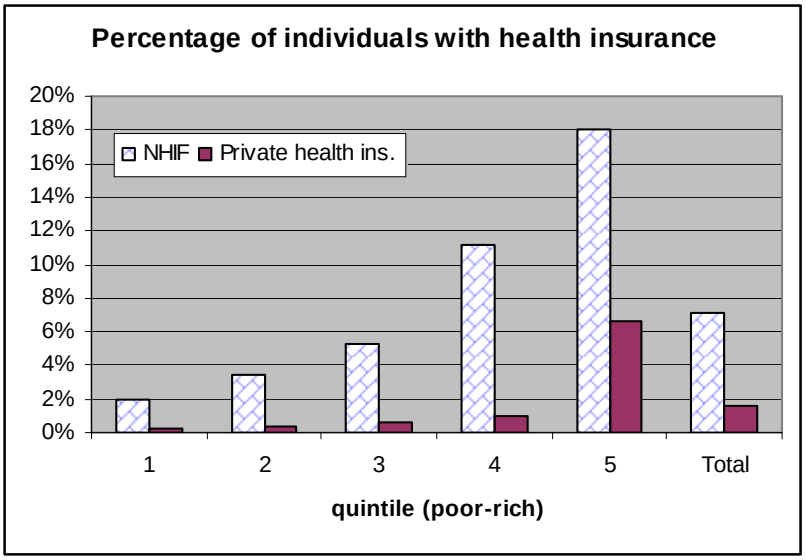
Even with central government support, mismanagement by local authorities has contributed to underfunding and poor performance of municipal health facilities. The central government is considering taking the management of local health facilities back into the health ministries.

3.4 POOLING AND ALLOCATION OF FINANCIAL RESOURCES: HEALTH INSURANCE

Kenya already has hospital care insurance, provided via the 40-year-old NHIF; all employees are compulsorily insured and make monthly statutory contributions. Informal sector workers may participate and contribute voluntarily to the scheme. NHIF covers about 10 million beneficiaries. However, it only covers inpatient health care costs, based on approved rates; members pay out-of-pocket fees for diagnosis, treatment, and pharmaceuticals above these rates, in addition to all outpatient services. Hence the financial protection by the NHIF is still quite weak for those who seek care in private facilities.

It is estimated that 9.8 percent of the population have some form of health insurance coverage: 7.1 percent are members of the NHIF, and 1.6 percent are covered by some other form of prepayment scheme, including private individual and employer insurance schemes (GOK 2009a). The level of insurance coverage is higher for urban areas, at 20 percent, than for rural areas, at 7 percent (Xu et al. 2005). Health insurance coverage varies across income quintiles, as Figure 4 illustrates.

FIGURE 4. PERCENT OF INDIVIDUALS WITH HEALTH INSURANCE



Source: Adapted from Xu et al. 2005.

Health insurance participation in Kenya is influenced by the institutional environment. Wealthier individuals are more likely to have health insurance, and those with employment are especially likely to have NHIF membership as it is legally mandated.

Private health insurance schemes continue to be regulated by the Commissioner of Insurance. A few perform the dual functions of insurance and service provision in order to contain costs, especially for outpatient services. The proposed health care financing strategy includes a framework for regulating health insurance. Future regulation of private health insurance should guarantee that the programs are financially sustainable and meet certain performance standards (Drechsler et al. 2005).

3.5 PURCHASING AND PROVIDER PAYMENT

3.5.1 POLICY FOR USER FEE PAYMENTS IN THE PUBLIC SECTOR

Cost-sharing was not part of the policy discussion between 1965 and 1988, when the health financing system in Kenya was supported primarily via general tax revenue. However, in the late 1980s, cost-sharing started to attract considerable policy attention. In 1989, severe government budgetary constraints led to the introduction of user fees for outpatient and inpatient care at government health facilities. Yet for children under five and for specific ailments, an exemption from fees was introduced. In addition, health care at dispensaries would still be delivered free of charge. In 1990, as a result of widespread protest, the user fee policy was reformed; outpatient registration fees were removed, while other fees were retained. In 2004, the Ministry of Health reduced the user fees in health centers and dispensaries to minimal levels in the "10/20 policy": patients pay Ksh 10 at dispensaries and Ksh 20 at health centers.

3.5.2 TRENDS IN COST-SHARING REVENUES

The trend in cost-sharing revenue has been mixed, as shown in Table 15. From 2002/03 to 2003/4, revenue decreased from Ksh 1,032.9 million to Ksh 1,004.9 million —a decrease of 3 percent. Revenue then increased, by 9 percent and 34 percent respectively, in 2004/05 and 2005/06. In 2006/07, revenue

decreased by 3 percent, but resumed an upward trend of 11 percent and 14 percent in 2007/08 and 2008/09 respectively. The bulk of these revenues are generated by hospitals.

The increase in revenue collection may reflect increased reporting rates by facilities. There have also been improvements in revenue collection through such changes as installation of cash registers in some hospitals as well as, to a small extent, increases in fee levels. However, revenue collection from primary health facilities has been minimal, largely because so many patients seek waivers due to inability to pay for the services.

These user fees account for about 3 to 5 percent of the ministries of health recurrent budget and 30 percent of the recurrent budget for operations and maintenance.

TABLE 15. TOTAL REPORTED REVENUE COLLECTION

Financial Year	Total (Ksh, Million)	Annual Growth
2002/03	1,033	
2003/04	1,005	-3%
2004/05	1,100	9%
2005/06	1,467	34%
2006/07	1,419	-3%
2007/08	1,572	11%
2008/09	1,800	14%

Source: Division of Health Care Financing, internal statistics.

Several studies have pointed to the negative impact of user fees on utilization of health care services in Kenya. A study on the impact of the 10/20 policy showed a 50 percent increase in utilization after the fees were reduced.

3.5.3 ALLOCATION OF USER FEE REVENUES

Prior to the gazettement of the HSSF, the revenue-collecting health facilities were allowed to retain 75 percent of revenues for improvement of their facilities. The remaining 25 percent of the revenue collected went towards financing promotive and preventive services in the district. Currently, hospitals are retaining and spending 100 percent of resources collected through cost-sharing. The Health Sector Services Fund allows the health facilities to retain 100 percent of revenue collected, generally used to buy medical supplies and hire casual staff.

3.5.4 INFORMAL USER FEES IN THE PUBLIC SECTOR

There has been no formal study to estimate the value of informal user fees. The household expenditure and utilization survey, conducted in 2007, estimated that about Ksh 7 billion was actually paid to public providers, compared to the reported Ksh 1.5 billion for the same period. This survey finding suggests a level of under-the-table revenue collection—or outright theft of funds. This finding is confirmed by the huge increases of revenue collection in hospitals that have installed a computerized revenue collection system.

3.5.5 CONTRACTING MECHANISMS BETWEEN MINISTRIES OF HEALTH AND PUBLIC OR PRIVATE SERVICE PROVIDERS (NON-PROFIT AND FOR PROFIT)

There is no contracting between the Ministries of Health and public or private providers. However, output-based aid (OBA) is currently being piloted in four districts and is intended to increase the use of

family planning services and to encourage obstetric delivery at health facilities. In this pilot program, providers in those districts are contracted to provide services and are reimbursed at agreed rates.

3.5.6 INCENTIVE AND PERFORMANCE-BASED FINANCING SCHEMES

Although the need to introduce performance-based financing was recognized in the Health Policy Framework (1994), little has been done towards this end. Resources continue to be allocated according to population-based indicators, an approach that does not introduce efficiency in resource use. Moreover, most health resources are controlled at the center, and the facilities do not even know their value. There is no incentive to rationalize their use due to the perception that the center will always cover any shortfall.

The envisaged devolution of funds through the HSSF and HMSF offers a good opportunity for introducing performance-based financing in the health sector. Performance-based financing or output-based financing is also being piloted in Northeastern Province by UNICEF. Under the pilot scheme, health centers and dispensaries conducting deliveries are scored across a number of parameters. If a facility scores 100 percent, it receives the maximum payment of Ksh 112,000 in a quarter; a score of 50 percent results in half payment, Ksh 56,000 in a quarter.

3.6 INSTITUTIONAL CAPACITY BUILDING FOR FINANCIAL FUNCTIONS

The Department of Policy and Planning drives the health financing agenda for the health sector. This department is staffed with officers seconded from the Ministry of Planning and National Development; it thus lacks adequate staff in terms of numbers and skills to effectively spearhead the health financing process. Worse still, its officers are subject to transfer to other line ministries. This reduces the opportunities for continuity and poses the risk that the health financing agenda will fall off the radar if key members of the team are transferred.

3.7 FINANCE SUMMARY

The health sector in Kenya continues to be financed from three primary sources: public, private including households (consumers), and donors. According to the 2005/06 National Health Accounts (NHA), the total health expenditure in Kenya was equivalent to about 4.8 percent of GDP at current market prices, which translates to per capita health spending of approximately Ksh 1,987 ($27) (GOK 2009b).[11] Households remain the largest contributors of health funds, at 35.9 percent, followed by the government, and then donors, who contribute approximately 30 percent. The high out of pocket household expenditures and the dependency on donors, especially for priority interventions, has prompted the government to embark on developing a health financing strategy. In the short term, the National Hospital Insurance Fund (NHIF) will be restructured to play a bigger role in financing health and a review is currently underway.

The public health sector is committed to a new policy of funding health facilities directly, after a successful pilot in Coast province. This direct funding approach is based on the gazettement of a new Health Sector Service Fund (HSSF) and a Hospital Management Services Fund (HMSF), both scheduled to be rolled out in July 2010. However, fund management still needs to be developed. The District Health Management Teams (DHMTs) who will play a key role in management of these funds are yet to be trained; and in turn, training will need to cascade to lower level facilities. The focus should now shift

[11] All dollar figures are USD.

to review of the public health act in order to make health facilities accounting units, consistent with the proposed constitution. Equally, the development of the lagging health care financing strategy needs to be fast-tracked.

HIV/AIDS continues to be largely financed by Development Partners (who contribute 75% of resources), which poses questions with regard to the sustainability of the Kenyan HIV/AIDS program. The Government of Kenya, through the National AIDS Control Council and in collaboration with other stakeholders considers planning for predictable and sustainable HIV/AIDS financing a top priority. Towards this end, a Steering Committee has been constituted to guide in the development of alternative ways of raising domestic resources.

4. HUMAN RESOURCES

The bellwether health statistics in Kenya, including life expectancy, infant mortality, and maternal mortality show long-term decline. In the last five years, however, most of the health indicators have improved, as shown in the 2008/09 Kenya Demographic and Health Survey (KDHS) (KNBS 2010). According to the Government of Kenya's *National Human Resources for Health Strategic Plan 2009–2012*, "the acute shortage and maldistribution of healthcare workers has been contributory to [the long-term decline], and now stand in the way of the achievement of the NHSSP II and the MDGs." This module reviews the current state of human resources for health (HRH) in Kenya, as well as the strengths and weaknesses of the supporting systems to plan, develop, and manage the health workforce in Kenya.

4.1 HUMAN RESOURCE STATISTICS

As with many health statistics in Kenya, accurate information about the number, location, and skills of healthcare workers in Kenya is fragmented and frequently of suspect quality. Where possible, the data presented here are selected from careful assessments and mapping studies where available, filled in with information from the Ministries of Health and Finance (principally the payroll database).

4.1.1 HUMAN RESOURCES FOR HEALTH PER 1000 POPULATION

While the ratio of healthcare workers in Kenya falls below the WHO-recommended 230/100,000, the current level of 169 compares favorably to other countries in the region (see Table 16).

TABLE 16. HEALTHCARE PROVIDERS PER 100,000 POPULATION

Country	Year	Doctors	Nurses	Total Health Workers
Kenya	***2007***	18	128	169
Kenya	***2003***	15	133	148
Uganda	2004	8	73	82
Malawi	2004	2	26	29
Mozambique	2004	3	20	34
South Africa	2004	74	393	468
USA	2000	247	901	1,147
UK	1997	222	1,170	1,552
WHO minimum		20	100	228

Sources: (WHO 2006b, MSF 2007, MOH Data 2008)

It should be noted that these statistics include healthcare workers who are registered but not necessarily employed in the sector. (More about unemployed healthcare workers below.)

4.1.2 DISTRIBUTION OF HEALTHCARE WORKERS

While the total number of healthcare workers in the sector may be relatively high, maldistribution—between urban and rural areas, by province, and by level of care—contributes to the country's inability to meet the health services and goals as spelled out in the NHSSP II (MOH 2005). While that plan strongly emphasizes primary care, the current distribution of healthcare workers by service delivery level does not reflect that emphasis.

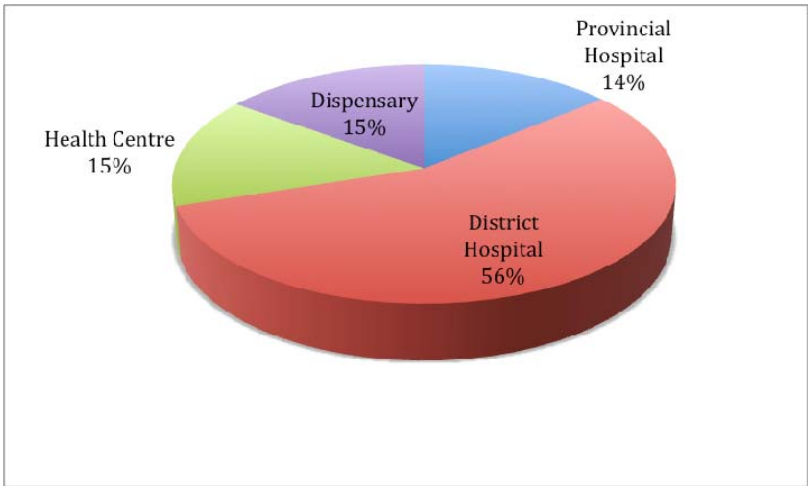
Table 17 and Figure 5 show that less than one third of healthcare workers are employed at the primary level, with significantly more than half employed at district hospitals. This distribution is clearly at odds with the intent of the NHSSP II and the "care pyramid" discussed in that document (and reproduced in Figure 13).

TABLE 17. HEALTHCARE WORKER DISTRIBUTION BY SERVICE DELIVERY LEVEL

	Provincial Hospital	District Hospital	Health Centre	Dispensary
Doctors	35%	63%	1%	0%
Clinical officers	10%	70%	16%	4%
Nurses	14%	54%	15%	17%
TOTAL	**14%**	**56%**	**15%**	**15%**

Source: MOH 2006d.

FIGURE 5. HEALTHCARE WORKER DISTRIBUTION BY SERVICE DELIVERY LEVEL



Source: MOH 2006d.

In addition, there is wide variety of HRH fill rates based on service delivery level (see Table 18).

TABLE 18. RECOMMENDED NURSE COMPLEMENT COMPARED TO ACTUAL

	Recommended # of Nurses	Mean Actual
Provincial hospital	200	300
District hospital	68	62
Health centre	14	5.2
Dispensary	2	1.7

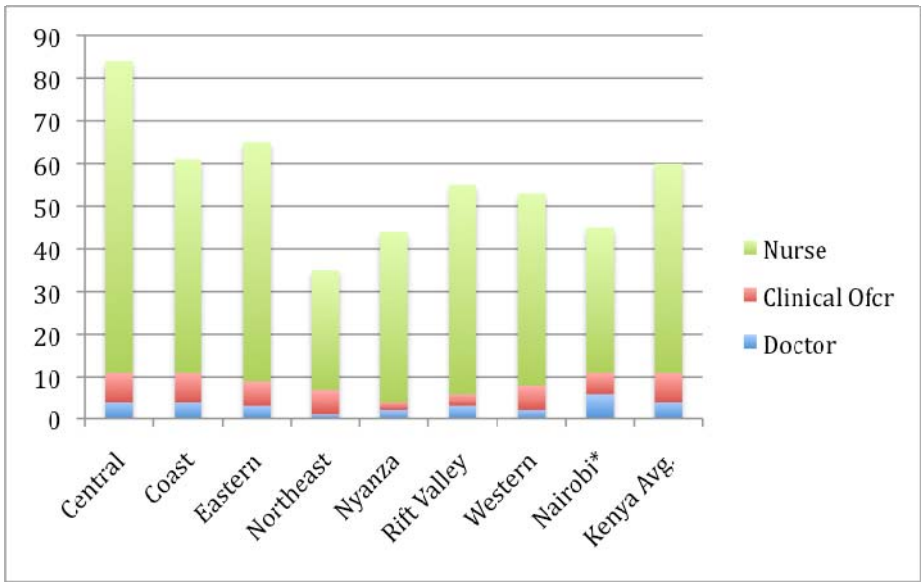
Source: MOH 2006d.

Further exacerbating the maldistribution of healthcare workers by service delivery level is the fact that just two hospitals, Kenyatta National Hospital and Moi Teaching and Referral hospital, employ 42 percent of Kenya's doctors and 13 percent of all nurses. Given the relatively higher salaries of doctors at those facilities, the ministries' estimate that 25 percent of the HRH budget for the public sector is spent in these two hospitals seems plausible.

Figure 6 shows that the distribution of healthcare workers varies markedly by province. At the extremes, the Central province has 84 healthcare workers per 100,000 people, while Northeastern has

only 33. This inequity is further exacerbated by the relatively low density of population in Northeastern, spread across an expanse of territory. The distribution also shows an inequity along urban/rural lines: Northeastern is considered the most rural of provinces, while Central is the most urban (MOMS & MOPHS 2010g).

FIGURE 6. HEALTHCARE WORKERS/100,000 POPULATION, BY PROVINCE



Note: * Most Nairobi facilities are under the control of the municipal government; hence these numbers show an under-representation for Nairobi.

Considering the question of ghost workers, statistics vary widely. A 2006 HRH mapping study found that "1.3 percent of healthcare workers on the books were found to have retired, absconded, or died" (Muchiri and James 2006). A second study from the same time period found similar numbers of ghost workers. Several key informants, however—including health ministry officials—put the percentage much higher, as much as 10 percent. A health worker headcount in Nairobi revealed that of 21,000 healthcare workers on the payroll, only 17,000 (80 percent) could be accounted for.[12] These Nairobi findings lend credence to the estimates of MOH officials.

4.2 HUMAN RESOURCE PLANNING

4.2.1 HUMAN RESOURCE INFORMATION SYSTEM

In Kenya HRH data systems are fragmented and disconnected. The health ministries maintain the IPPD (Integrated Payroll and Personnel Database), with basic personnel information about each employee as required for payroll—a function performed in most countries by the Ministry of Finance. The nursing council and other medical boards/councils maintain databases for the purposes of licensure and re-licensure (every three years for nurses). At least two donor-driven efforts are underway to set up HRIS (Human Resources Information System) databases, in parallel with the IPPD[13]. An effort internal to the health ministries would add fields to the existing IPPD system so that it could be used as a comprehensive HRIS for the public sector. HRH data reported in the Economic Survey are suspect, as no data are available on numbers of personnel by cadre either in the FBO or private sector.

[12] BBC news report, April 22, 2010.
[13] One is an Emory University-led effort, and the other is part of the USAID-funded Capacity Project.

4.2.2 A FUNCTIONING BUT FRAGMENTED HR PLANNING SYSTEM

Human resource planning is now guided by the National HRH Strategic Plan, which was funded by USAID and prepared by the health ministries through the support of the Capacity Project. The split in ministries, however, has delayed the final approval of the report; it was originally completed in 2007, but is currently under update to reflect the split ministries. Meanwhile, the two Ministries have formulated their own plan, showing only workforce projections. Workforce projections are also represented in the health ministries' Annual Operational Plan. However, these workforce projections are based on population ratios rather than on staffing norms, disease burden, or other health trends. A 2009 study of HRH concluded that the situation illustrated "fragmentation of a critical health sector reform initiative, caused not so much by the split of the ministry, rather by two parallel interventions – one donor led, the other central government led – leaving the ministries on the receiving end of both" (DfID 2008).

Although a national task shifting strategy or policy does not exist, use of community resource persons in provision of HIV services and ARV provision is ongoing and integrated in most service provision with people living with HIV/AIDS and CHWs being used to provide services such as patient education, simple recording at sites, filling etc. In addition, many ART service provision points are managed by clinician nurses who substitute for shortage of clinical officers and medical officers

Even given these limitations, planning continues to be carefully carried out, taking into account all variables including production, recruitment by other means, and attrition from all causes.

4.2.3 DEDICATED HR BUDGET

There is a dedicated budget for HRH at each level of providers, central divisions and programs. A very important yet often-overlooked point, however, is that facilities are only allowed to budget for staff in post, rather than establishments (DfID 2008). Given the long period required to fill vacancies, this practice results in ever-shrinking posts and HRH budgets for major health cadres. Under the HSSF, the budget for HRH will remain under central control; salaries will be funded separately from operating expenses, which will be under the control of Community Health Committees.

4.3 HUMAN RESOURCE POLICIES

In Kenya, the Ministry of State for Public Service maintains a code of regulation which incorporates provisions of all relevant legislation on matters of employment and other human management issues. In addition, the Ministry has developed a thorough and consistent job classification system for all civil servants, including healthcare workers. FBO facilities, especially those represented by the major FBO health coordination organizations (e.g., CHAK) use the same job classifications, which simplifies worker movement between sectors.

Likewise, the MOHs carry out compensation and benefits administration consistently, with a well-developed compensation system and a set salary scale. The objective is to reach internal pay equity across the civil service, blind to internal and international competition for HRH labor.

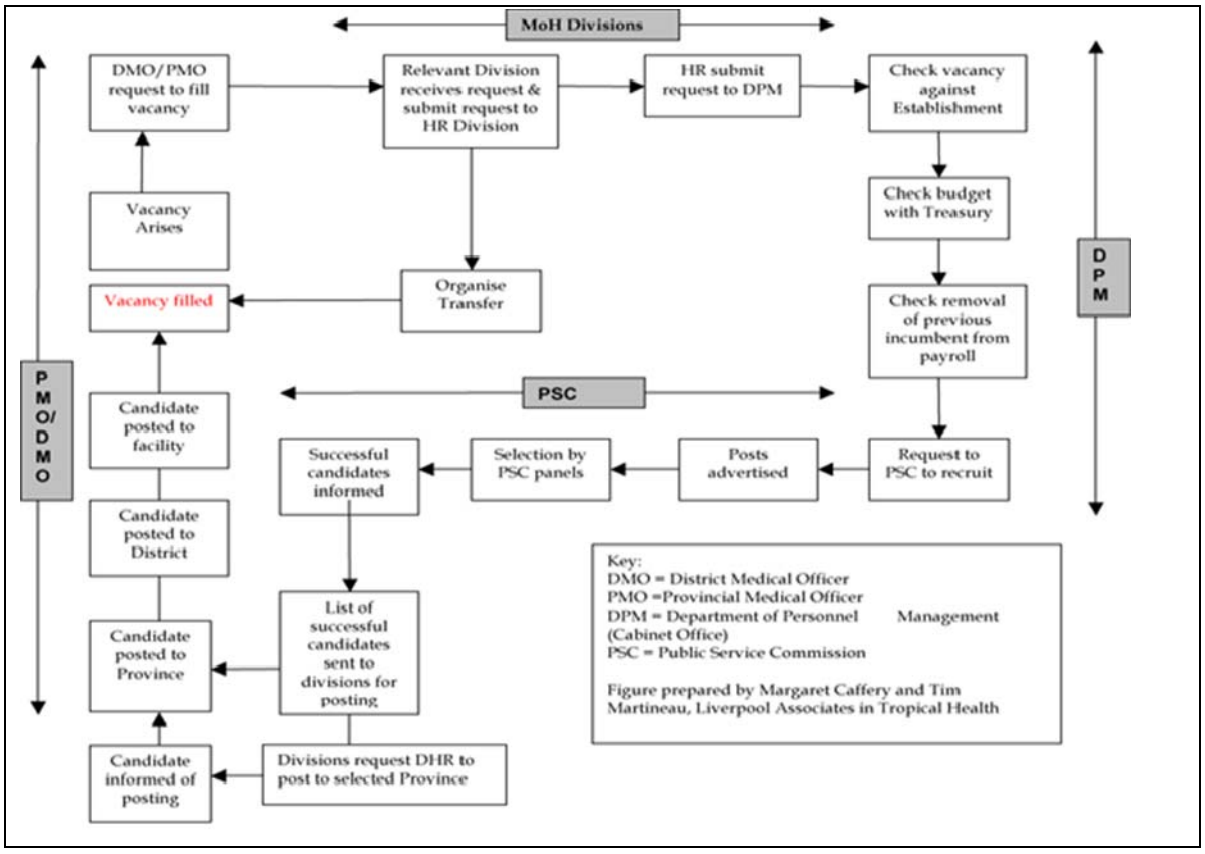
Salaries are based on level and tenure. Allowances are decided based on clearly documented factors such as housing costs by area. A 2006 study, however, found that one-third of the workforce was receiving allowances for which they did not qualify (MOH 2006d).

Recruitment and hiring for established positions follow a well-documented process involving the Ministries of Health, Ministry of State for Public Service, the Public Service Commission, and the Ministry of Finance (Adano 2008). The process is diagrammed in Figure 7. Recruitment is carried out centrally, and advertised positions do not specify the posting location. While posting location is a primary driver

of job satisfaction and retention, employees are posted wherever deemed necessary according to a national-level function. Thus, a nurse who preferred to be posted near her family in a remote area may be posted in Nairobi, while a nurse from the capital may be posted in a rural health center in Northeastern province. The recruitment and hiring process is cumbersome, and it takes between one and two years to fill a vacancy.

There has been some movement lately to decentralize hiring and placement. We note some recent recruitments at the provincial and district level, and recent advertisements for nurses and other cadres that specify facilities and district. Nurses and other cadres can apply according to the vacant positions in facilities and district. This is a recent move towards decentralization of recruitment process.

FIGURE 7. PROCESS FOR FILLING A VACANCY, KENYAN HEALTH MINISTRIES



Source: Report of the Joint Design Mission to the Kenyan Health Sector, 2007.

There is a workplace safety policy in place to protect healthcare workers from avoidable infection. Since 2005, there has also been a special policy related to worker safety related to HIV/AIDS infection (Office of the President 2005).

Of special interest, given high vacancy rates and increasingly frequent discussions of task shifting, is the movement to abolish the job category of enrolled nurse. Enrolled nurses receive a certificate at the end of 2½ years of training, while registered nurses must complete a diploma course that takes 3½ years. While enrolled nurses make up the majority of nurses working in Kenya, there is a push to end enrolled nurse training, allowing the job category to dwindle as enrolled nurses retire over time. This is being done without due consideration of the resultant cost to the health care system.

There is a formal process for certification and re-certification for medical professionals in Kenya (Association of Medical Practitioners 2007, Nursing Council 2009). For example, nurses who graduate from accredited nurse training institutions in Kenya and pass the examination are registered for a three-year term. Every three years, nurses are recertified based on documented criteria such as continuing education credits. Medical professional councils also carry out disciplinary measures when necessary, and, importantly, prepare credentials for service providers who emigrate and wish to work overseas. These regulations are well spelled out in the various codes of conduct and ethics for the professional associations.[14]

4.4 PERFORMANCE MANAGEMENT

With a shortage of healthcare workers, especially in rural areas, helping the existing providers to be as productive as possible and to perform up to standard becomes especially important. While there are no rigorous studies of productivity in Kenya, studies from other sub-Saharan African countries suggest that providers spend less than half of their time in patient care (Health Systems 20/20 2010). Likewise, no careful studies of absenteeism have been completed. Indications from a few sample districts, however, suggest that absenteeism may be as high as approximately 20 percent for nurses, 29 percent for doctors, and 40 percent for lab technicians. Increasing the productivity of existing workers is almost always more cost-effective than hiring more workers, and in some cases hiring more providers may be impossible.

In considering the factors that help providers be optimally productive, clear performance expectations set forth in an accurate and up-to-date job description is an important starting point. A 2009 study found that most providers in Kenya do have access to a job description (Capacity Project 2009). Field visits conducted for this assessment confirmed that providers had seen a job description and could describe its contents, although most interviewees could not produce the written job description when asked.

The MOH supervision guidelines state that all providers should receive quarterly supervision visits. Supervision is conducted using a standard checklist for each level. The checklist covers service delivery of all types, as well as conditions of the facility such as hygiene and sanitation. While there are no records of the percent of supervision visits actually completed, field visits for this assessment revealed that the number of visits depends to a large degree on convenience. Facilities that are close to the DHMT offices may receive supervision as often as every two weeks. Remote health centers and dispensaries report receiving supervision visits as infrequently as twice per year. When asked about the supportive nature of the supervision, providers at most facilities stated the visits were helpful and that the supervisors seemed interested in helping them solve problems.

Both ministries of health have in place the same annual performance appraisal system. According to ministry guidelines, the appraisal is to take place once per year, and is used to evaluate the last year's performance, plan for the future year, and discuss training needs. In practice, however, interviewers for this assessment could not find any providers who had received a written evaluation in the last five years. On occasion some MOH officials do complete the forms, but usually in order to build a case for promotion rather than to provide feedback on performance.

The allowance system in place does not function as an incentive for health workers to undertake rural or remote postings. Indeed, in many cases the housing allowance for the capital city is much higher than that for rural areas.[15] The allowance system is not intended to serve as an incentive for good

[14] See, for example, the Nursing Council Code of Conduct and Ethics, July 2009.
[15] Key informant interview at MOPHS, 2010.

performance or productivity, nor does it serve as such. There has been no careful analysis of incentives needed for retention or performance. Further, there has been no study of disincentives for rural or remote postings that could be used to guide budget-neutral policy changes to improve retention.

4.5 TRAINING AND EDUCATION

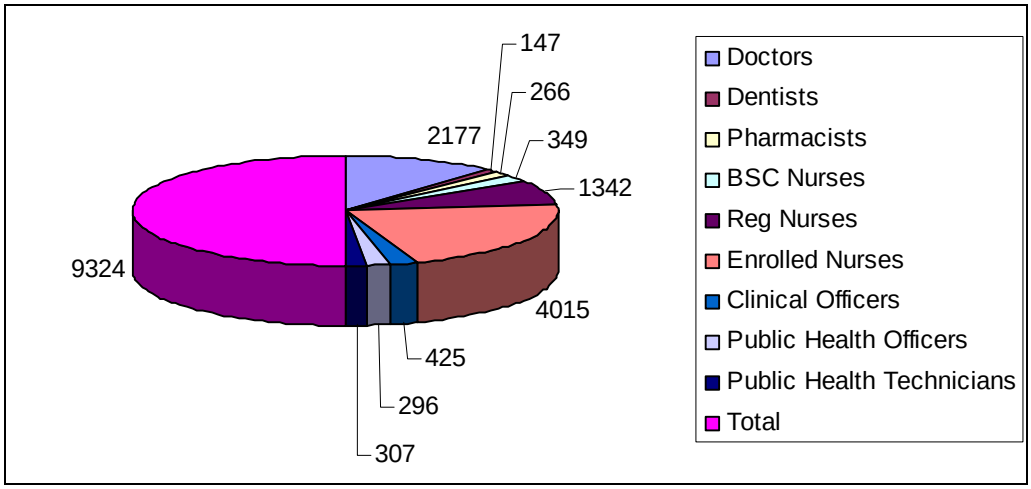
Any given year finds well over nine thousand medical professionals in training (MOH 2009c). See Figures 8 and 9 for breakdowns of training and graduation, by profession.

An average of 87 percent of healthcare professionals have received no training at all in the last three years. Only 2.6 percent have received some training in the last year (MOH 2006b). Interviews at facilities revealed that in-service training is largely opportunity-driven, rather than based on the skill-acquisition needs of the sector or individual providers. A recent study of MCH skills nationwide concluded, "health provider competency at performing basic, life-saving skills was quite low" (Mutungi et al. 2008).

The HRH Strategic Plan points out that Leadership and Management training is "missing" from the health sector, and it has become an objective of that plan. There is no program for conducting Human Resource Management training, nor for hiring individuals with those skills. Again, the HRH plan points to the dearth of HRM skills and skilled professionals as a major gap in the HRH situation in Kenya, and contains objectives for hiring and training specific to HRM.

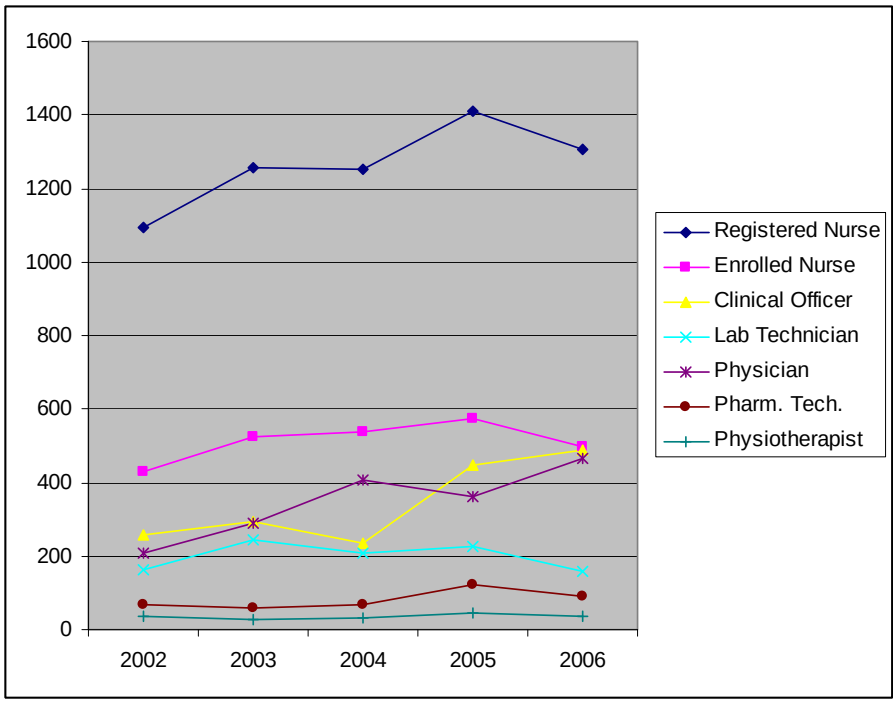
Objective 4.1 of the HRH Strategic Plan states the intention of the Government to finalize and implement a training plan. As of May 2010, this national health training policy is in draft form, yet to be approved by the Cabinet.

FIGURE 8. MEDICAL PROFESSIONALS IN TRAINING, 2005



Source: (Ndetei et al. 2008) .

FIGURE 9. NUMBERS OF GRADUATING MEDICAL PROFESSIONALS, 2002-2006



Training for doctors in Kenya takes place at MOH-run teaching hospitals. Training for other health professionals takes place at the 26 Kenya Medical Training Colleges and 44 accredited private-sector training institutions. The quality of training received at private institutions is judged to be on a par with those from KMTC. There is little or no communication between these training institutions and the target hiring organizations for their graduates, i.e., the MOHs or private-sector facilities (such as FBOs).

Taking KMTC as an example, its 26 institutions graduate approximately 4000 providers per year, from a slightly larger number of admissions. It receives 17,000 qualified applicants for these places. A severe shortage of academic staff is the limiting factor for admissions: of 1500 established posts for academic staff in KMTC, only 650 were filled.

The NASCOP is currently working with pre-service institutions with support from USG to integrate standard HIV training in University and Medical Training Colleges curricula

4.6 HUMAN RESOURCES FOR HEALTH SUMMARY

Kenya presents a unique case of Human Resources for Health (HRH) in sub-Saharan Africa. While there is an absolute shortage of healthcare workers, the provider-population ratio of 1.69/1000 (for all cadres of providers) is relatively high for countries in the region. The most pressing problem is the drastically unequal distribution of workers, by urban/rural areas, by regions, and by level of care. Rural dispensaries have 20 percent fill rates of their nursing establishments, while district hospitals have 120 percent fill rates. Approximately 25 percent of the HRH budget for the entire public sector is taken up by the two referral hospitals.

The reasons for low overall fill rates are often misstated as well. Most MOH publications as well as assessments of HRH in Kenya decry the "retention problem" as well as "brain drain" to other countries as key drivers of the HRH shortage. Yet turnover rates in Kenya continue to hover between 3–4 percent, quite low for these statistics anywhere in the world, for any industry. (Nursing turnover is 13 percent in the US (Kovner et al. 2007).) While brain drain, or emigration to other countries, receives

much publicity, nurse emigration in 2009 was approximately 300 nurses,[16] a tiny fraction of the nursing population in Kenya. Unlike most other countries in the region with a shortage of medical staff, there exists a large (yet undefined) population of unemployed healthcare providers, especially nurses, in the labor market in Kenya. The shortage of health workers has compromised service delivery including key programmes such as HIV/AIDS and this prompted the government request development partners to assist in the interim by employing health workers on contract terms. To date over 3000 health workers are employed on contract basis. On her part the government has agreed to absorb these health workers once their contract comes to an end.

[16] Interview, Nursing Council of Kenya, 2010.

5. GOVERNANCE

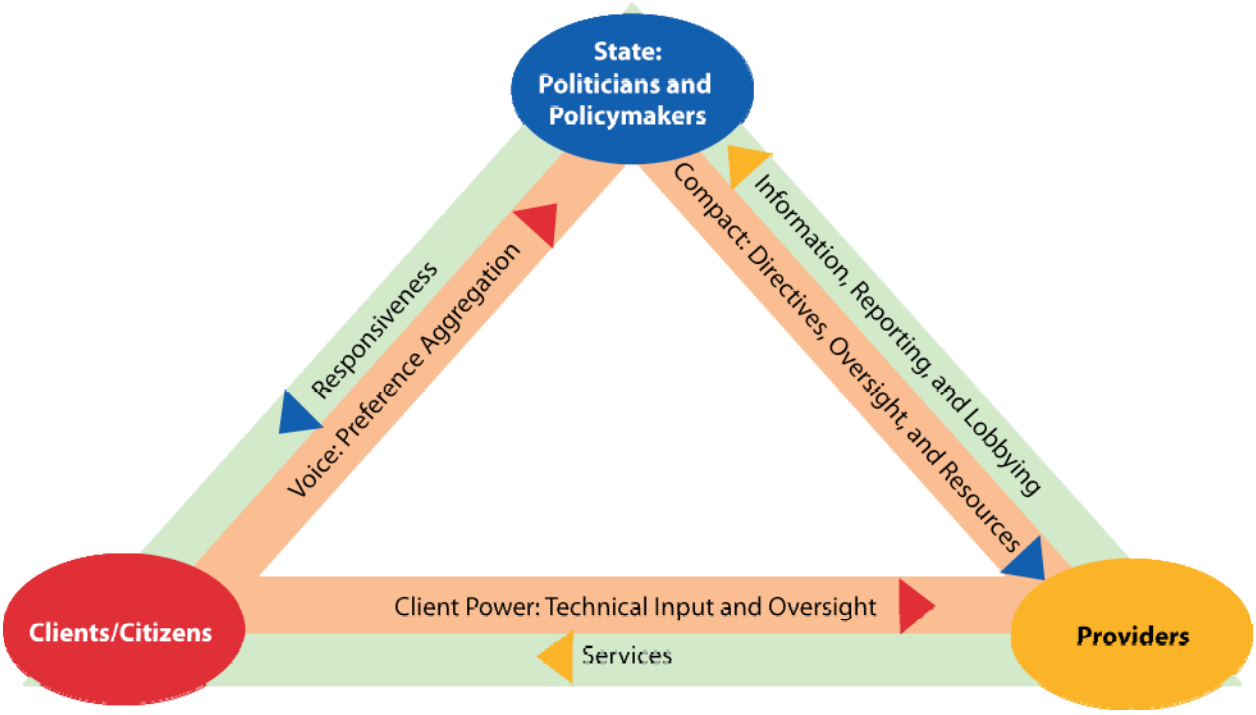
The Health Governance module presents an assessment of health governance functions. It focuses on three main sets of actors and the linkages between them: State, Providers, and Clients/Citizens. (See Figure 10.) The module includes six key indicators, summarizing these relationships.

- Responsiveness and voice preference examine the links between the state and client actors.
- Client power and service delivery examine the links between client and provider actors.
- Information, reporting and lobbying and compact examine the links between actors in the state and provider categories.

A section on Health Sector Coordination is also included, to focus on some of the overarching state policy and planning topics as well as relations with development partners.

The analysis reveals strengths and weaknesses of the governance of the Health sector and forms the basis of the proposed recommendations for improving health governance in the Kenya health sector.

FIGURE 10. HEALTH GOVERNANCE MODEL



Source: (Brinkerhoff 2008).

5.1 HEALTH SECTOR COORDINATION

The ministries of health provide leadership for the entire process of health policy development. Their main functions include coordination of development plans, development of policy, development of investment plans, and monitoring the implementation of plans.

The split of the Ministry of Health in 2008 into two ministries (the Ministry of Medical Services and the Ministry of Public Health and Sanitation) brought new challenges for harmonization and coordination of programs, activities, and planning processes. The MoH Institutional Review Report (2008) also revealed that the split of the Ministry of Health resulted in multiplication of technical departments, proliferation and fragmentation of support service departments, and lack of clarity in roles and responsibilities.

A code of conduct for the health sector has been developed and is being used. There is also a joint financing agreement which has been agreed upon and will be used by participating stakeholders to pull resources for various interventions. Various mechanisms facilitate the participation of faith-based organizations (FBO) and civil society organizations (CSO) in setting the health policy agenda in Kenya, including Kenya Health Sector Wide Approach to planning (SWAp) and the Joint Program of Work and Funding (JPWF).

The health ministries are responsible for planning and monitoring the implementation of the health plans. The plans are launched in special forums and shared with the other line ministries as well as FBO and CSO organizations. The ministries' plans are also shared within their own internal departments and with the health management teams at the province and district levels, but not at the health center and dispensary levels.

Priority issues within the sector may only be partially addressed, as new plans are developed before the previous plans are fully implemented. The health ministries, through the planning process, have tried to eliminate bias and inequality in service delivery. The current NHSSP has as its goals the reduction of inequalities in health care services and reversing the downward trend in health-related outcome indicators. These goals are further articulated as the highest-priority strategy in the AOP 2009/10. The impact of these high-priority strategies has been limited, however: the supply of drugs to facilities and dispensaries continue to raise serious questions regarding wastage of drugs in some facilities and shortages in others.

Ideally, development of the AOP would be informed by the objectives and performance of the previous year's plan. Although reviews of previous AOPs are done, their recommendations are not fully utilized to inform future AOPs. Over-production of plans without harmonization creates confusion and makes it difficult to achieve multiple objectives within the health sector. Implementation is weakened by inadequate resources to support sector priorities, occasionally causing the scaling down of sector priorities (as discussed in the finance chapter). In addition, priorities and performance targets are not effectively communicated to stakeholders, thus making it difficult to evaluate sector performance. The review of AOPs provides a good opportunity to identify the implementation challenges which inform the target setting for the following AOP.

An estimated 88 percent of donor funds to the sector are off budget and hence not fully captured by ministerial reports. Recently, under the shadow budget, efforts have been made to account for as much of these donor resources as possible. Although budgets are prepared annually through the MTEF process, they rarely guide the implementation of the AOPs, as preparation of budgets and work plans are two parallel activities carried out by different departments within the Ministries at different times.

Existing financial accountability systems are weak and are not always clearly communicated to the partners. Therefore, despite the code of conduct requiring NGOs to provide their financial returns,

they have not been doing so consistently. There is concern that some NGO funding (especially that concentrated on HIV/AIDS programs) may be unaccounted for and perhaps not aligned to sector plans. The Ministry of Health, before separation, was ranked 22nd out of 40 most corrupt public organizations in the East Africa region. (Transparency International 2009)

The Global Fund for AIDS, TB, and Malaria, including the CCM, has not been fully integrated into the existing health sector coordination structure and has instead created a parallel framework. The CCM operates vertically, without adequate involvement of all stakeholders.

5.2 RESPONSIVENESS

Responsiveness refers to the organization and leadership necessary to facilitate collaboration between government and civil society, involving a broad range of stakeholders (including some not typically considered to be health-related) to participate in identification of health priorities and in planning, budgeting, and monitoring health sector actions. This dimension of governance also considers the health system's ability to incorporate the input of these stakeholders.

The ministries of health have been encouraged to reach out to all stakeholders in the health sector activities, in order to avoid conflict of interest at various stages of the implementation of sector programs. They have accordingly involved representatives from the NGOs and development partners in the planning process, monitoring, management, and funding for the programs (MOH 2005). The health sector plans are consolidated by the health ministries and shared with line ministries, partners, and stakeholders. Some plans are released to CSOs and FBOs through summits.

The health sector is coordinated by the JICC. The following mechanisms, which feed into the JICC, have been put in place to ensure participation in the discussion of health policy agenda: the Health Sector Coordinating Committee (HSCC), Health Sector Coordinating Committee Steering Committee (HSCC-SC), and Systems Support and Technical ICCs. The systems support and technical ICCs provide coordination and oversight functions, while HSCC and HSCC-SC provide policy development and planning functions[17]. There is also a SWAp Coordinating Committee established to provide oversight and to coordinate the design of a Kenyan health SWAp. The committee has worked effectively in coordinating the stakeholders, mobilizing resources, and reaching consensus on the Kenyan health SWAp. The majority of the committee members are ministry staff, with some representation from the Christian Health Association of Kenya (CHAK), Health NGOs Network (HENNET), and the development community.

These various coordination mechanisms consume a great deal of time, as each committee meets and deliberates on issues which are again taken to higher committees for similar deliberations. Rationalization of the committees could enhance efficiency and effectiveness of policy development and sector planning. The MoH Institutional Review Report (MOMS & MOPHS 2008b) also raised issues regarding the coordination structures.

The ministries have adopted a bottom-up target-setting approach, designed to ensure that the local community's input is incorporated into the health policy. The effectiveness of the bottom-up approach, however, is in some question. In some cases the views of the community may be requested but not actually considered in the final choice of policy alternatives for the health sector.

[17] The Health Sector Coordination Structures diagram is available through the DPHK website. Accessed March, 2010: http://hdwg-kenya.com.s83469.gridserver.com/new/index.php?option=com_docman&task=doc_download&gid=996&Itemid=61.

The health ministries produce many reports at all levels, including policy guidelines, service delivery statistics, and financial reports. Only some of these reports, however, are available to the public or hosted on the ministries' websites. Information on budget forecasts and health expenditure rarely reach the lower levels, such as the district and dispensaries. The civil society organizations (such as HENNET) and FBOs are even less likely to receive information on budgets and expenditures, except those who attend MTEF sector hearing sessions. Failure to make information available limits transparency and accountability of the MoH and denies stakeholders a basis for effective participation in the sector activities.

The existence of FM radio stations in all regions of the country is an important infrastructure for facilitating dissemination of health care information and health education. The FM stations, which also broadcast in local languages, are important tools that could be used to improve health of the community through dissemination of health care information.

5.3 VOICE PREFERENCE

While Responsiveness deals with the actions of government in obtaining and responding to civil society input, this section considers the effectiveness of external stakeholders in providing input into health policy. Voice preference thus refers to the ability of civil society, experts, and citizens to act as credible partners with government in improving health services: for example, by analyzing data from a variety of sources (including citizen feedback) and presenting that feedback to policy makers in ways that positively influence policy decisions.

This section also examines the opportunities available to these external stakeholders for influencing health policy. The media's influence on health policy through routine reporting, features, debate coverage, and opinion articles is also an important factor in this component of health governance.

Recognition of health sector beneficiaries, service users and the general public is important as it translates into willingness of the ministry to work with others and listen to them. These stakeholders thus have to ensure that they are recognized and that they share their expectations with the government.

Apart from the community, CSOs and FBOs have claimed some space for voicing their views. The Health NGO's Network (HENNET) was established in 2007 as an umbrella body for non-governmental organizations and FBOs working in the health sector, giving a voice to civil society organizations. It represents its members in forums organized by the health ministries, such as the Health Sector Coordinating Committee. (FBOs, which are heavily involved in service provision, are discussed in the information, reporting and lobbying section.). These entities have been engaged in the development of Kenya National AIDS Strategic Plan III (which has been developed through an elaborate multi sectoral approach) and continue to participate in all reviews of the HIV/AIDS program in the country.

HENNET plays a key role in ensuring that the health sector, through the health ministries, achieves its goals (COC 2009). It holds the government accountable by raising concerns regarding the effective operation of district stakeholders' forums and by using other available mechanisms to facilitate participation of interested parties. HENNET officials reported that the district stakeholders' forums are sometimes not held quarterly as planned. Although several mechanisms for HENNET member participation exist, they are sometimes not fully used, as some members refrain from participation. The private, for-profit health sector, currently represented by Kenya Private Sector Alliance (KEPSA), has yet to be fully involved in the planning and policy process, although it has signed the health sector code of conduct and is represented in the Public Private Partnership ICC.

There are vibrant management committees at the health facility and dispensary levels which include clients/citizens. The management committees participate actively as true partners in community health provision. Their voice is not heard, however, at the national level, as their views are not requested to inform government policy. Committees in two of the health centers visited by the assessment team noted that their views, aired through the district health management teams, have not received feedback regarding what alternatives have been chosen in deciding the priorities and policies of the health sector.

Individual stakeholders who seek to provide input into health policies, directives, or resource allocation must join existing forums for the health sector or seek membership in the existing NGO networks working in the health sector. Communication avenues available to individuals include the press and organized lobbying, which the health ministries may or may not recognize as credible channels for providing input to the sector policies.

HENNET has been very vocal in demanding health information and space to participate in the sector planning process. With the proposed introduction of the Health Sector Service Fund (HSSF) at the lower levels (dispensary and health centers), HENNET has realigned its strategic objectives to provide oversight of the fund and to generate and share health information with other stakeholders. This has positioned HENNET as an organization providing oversight on the implementation of health sector policies and programs. HENNET has good relationships with donors and is able to conduct capacity building and to generate and share information on the health sector; it has advocacy capacity and a comprehensive community strategy. These attributes position HENNET as an organization not only with strong voice but also with the resources, both financial and human, to hold the government accountable with regard to the performance of the health sector.

The main activities for civil society organizations interested in the health sector include:

- capacity building for health officers
- generating and sharing information on health issues
- provision of health services (i.e., FBO hospitals and clinics, discussed below)
- conducting advocacy and lobbying for better health

Despite these efforts, the voice of the CSOs in the health sector is still weak, as only a few of the organizations have a strategic approach towards engaging the government in improving the performance of the sector.

Members of CSOs are professionals with various areas of expertise, including management or administration, communication, law and governance, public policy, religion, financial management, resource mobilization, diplomacy and international relations, medicine, nursing, and pharmacy. They also have a wide range of experience acquired over time. They draw on these experiences and skills to implement their programs and specific activities. Despite this expertise, they also face coordination, transparency, and accountability challenges.

Stakeholders in the health sector have been reluctant to share health Information or health-related information. Research institutions and the media have tried to create incentives for sharing information by giving out free and timely information to the public and private stakeholders. This information has come in several forms: research findings and recommendations on specific health issues and diseases; reports analyzing the government health budget and expenditure on health sector; and campaigns against diseases affecting communities (e.g., the Anti-Jigger Campaign in Central Province).

Local and international press recognize the significance of access to health information, but they report that the health sector, including the government, offers very little health care information. Given the limited health information, the media have not focused much of their news and programs on health policy issues affecting individuals and communities. A media professional (interviewed as a key informant) stated, "Health care information is very restricted. Even those who have it want to sell it to us and they release it in bits and pieces, as much of it is confidential." In recent months, the media have reported on such health policy issues as health insurance and use of contraceptives by school children.

The draft health sector communication strategy is expected to define effective ways of ensuring that information in the sector is shared widely among all stakeholders.

5.4 CLIENT POWER: TECHNICAL INPUT AND OVERSIGHT

Client power refers to the ability of citizens, citizen groups, and watchdog organizations to monitor and oversee the actions of health providers, ensuring that health services are made available, maintain high quality, and follow accepted norms. The relationship between clients and providers can be strengthened through collective action, such as facility-based health committees or civil society organizations that provide voice to otherwise marginalized clients. Participation in joint forums of citizens and providers can also improve the voice that citizens are able to exercise. Additionally, markets may allow citizens to exercise power by providing choice and competition, improving provider accountability

The health ministries have prepared and distributed guidelines for establishing management committees at the health center and dispensary levels. These guidelines outline the procedures for election of committee members as well as their responsibilities. The committees are vibrant and participate in the identification of priorities for the facilities and dispensaries. They also monitor the daily functioning of the facilities and dispensaries and provide information regarding diseases and other health-related issues affecting the community. The committees have their own leadership consisting of a chairman, secretary, and treasurer.

There are no organizations or committees charged with overseeing the technical performance and ethical standards of health personnel.

5.5 SERVICE DELIVERY

Service delivery here refers to the ways that health providers communicate to clients about the services they provide, as well as the structures that support providers in improving performance of the health system. These indicators focus specifically on service transparency, incentives, and results-based services. The Service Delivery Module, in contrast, (as discussed below in more technical detail) studies the structures of the health system, the way that services are delivered, and the roles and responsibilities of each actor in the health system.

There are district- and facility-based client satisfaction surveys that are administered from time to time. The ministries encourage and expect facility management committees to serve as additional frameworks for provision of feedback. Suggestion boxes are used in some but not al, facilities to receive patient's suggestions. Most of the suggestions offered are about reduction of congestion at the facility, reduction of waiting time, and availability of drugs for treatment.[18]

[18] Interview with a Chairperson of one of the Hospital Management Committees.

It should be acknowledged that the recent reforms in the public sector require public institutions, including health facilities, to publish service charters, display prices on notice boards, and to consistently set up public complaint/feedback boxes as a form of accountability and feedback. These practices may not yet be widespread, but they are currently part of the performance contracts of public health facilities.

Determination of activities and services at the health facility has been based on the number of patients visiting the facility and the nature of the services they required. Service delivery and disease burden information has also been used to determine what services to provide. In some facilities, citizens have requested that a particular type of service be offered. For example, in one of the health centers visited for this assessment, the management committee (representing the views of the community) together with health center officials jointly presented their concerns to the Minister of Medical Services, requesting upgrading of the health center to a hospital. This request was granted and the Ministry released funding for the upgrade, which is currently ongoing.

At the lower facility level, clients air their views through the management committees; the same committees are used by the health facility to provide information to clients. A few facilities conduct community outreach programs to educate the community on health issues affecting the community. These programs create forums for sharing information and getting feedback from the community.

5.6 INFORMATION, REPORTING, AND LOBBYING

Information, reporting, and lobbying refer to the influence that providers exert on health policy, including advocacy and other efforts. It also refers to information reported from providers to ensure accountability and to inform policy decisions.

The health ministries have established a health information system (HIS) to collect, process, store, and distribute information on health. Health information is collected and passed up from the facility, district, and provincial levels, to the national level. There are serious challenges to collecting quality national-level data in Kenya, and the section on health information systems details some of these challenges involved in collecting accurate and timely data through the country's multiple data systems.

At the national level, data from the HIS is not being fully used to inform policies and planning processes in the health sector, due, in part, to the perceived poor quality of data being derived from the HIS. Health officials, especially at the lower levels, have raised concerns over the information on which the planning and priority-setting processes are based. These data-quality issues also foment challenges regarding the transparency and accuracy of health sector reporting. Likewise, the information passed back from the national to sub-national levels is not seen as adequate for health or local government officials to perform their planning and reporting functions.

At the facility level, information collected is not being used in these very facilities. It is merely reported up to a higher level to fulfill the requirements for reporting. However, the Community Based Health Information Management Systems (CBHIMS) project, designed to strengthen community-based health information management systems, has made information available at the local level for use by both the community and the health officials in selected parts of the country.

The African Network for Health Knowledge Management and Communication (AfriAfya) is one of the leading agencies in health knowledge management and communication with rural and other marginalized communities. Established in Kenya in April 2000, AfriAfya was set up to explore ways of harnessing modern information and communication technologies (ICTs) for community health and Development. AfriAfya created opportunities for learning and networking among these organizations. In the second

phase of AfriAfya, currently ongoing, the network is assisting the CBHIMS project partners to implement the use of Personal Digital Assistants (PDAs). The PDAs have been found to be a better alternative to the existing data collection system of using manual forms. AfriAfya has been key in both networking the various groups and sharing best practices and lessons learned in the various projects. Working closely with the ministries of health, it is hoped that this project will influence policy makers in adopting a modification of the systems currently running in the various projects.

The information produced by the MoH receives limited distribution. The majority of health sector reports are not available publicly, and much of what is available can only be found on the website of the health ministries. Only a few of the lower level facilities and dispensaries have access to the health Annual Operational Plan (AOP), and most dispensaries have never seen the AOP. Much of the information collected from the HIS is available only on request, and it may be granted or not granted depending on who is requesting the information.

The main conduit for health providers to advocate to the government are the various professional associations. While the professional associations do not have a formal role in setting policy in the health sector, they are seen as strong lobbying organizations, and their voices are heard at the national level.

The largest faith-based provider network in Kenya, the Christian Health Association of Kenya (CHAK), was registered in 1946. CHAK, together with two other FBOs, the Kenya Episcopal Conference of the Catholic Church and the Supreme Council of Kenya Muslims, have succeeded in creating space in the health ministries by signing a Memorandum of Understanding (MoU) with the government. Aside from monitoring and evaluating their health service provider network, CHAK secretariat functions include: conducting advocacy on health matters; training and capacity building; CHAK policy coordination; networking; and dissemination of information on health. CHAK has utilized an existing framework, the Church Health Services Coordinating Committee, for engaging the government. The other two FBO organizations have similar functions.

5.7 COMPACT: DIRECTIVES, OVERSIGHT, AND RESOURCES

This dimension refers to the process by which laws, policies, and regulations governing the health sector are formulated. It also describes the capacity of the government for oversight of safety, efficacy, and quality; its capacity for enforcement of guidelines, standards, and regulations; and the public perception of the burden imposed by excessive regulation. Compact also examines the ability of government to monitor health system performance and provide direction and guidance to the overall health system through laws, policies, strategic and operational plans, regulations, standards, and procedures for the health sector.

The push towards decentralization is intended to help plan for and provide priority services at the health facilities. The ministries of health have a adopted a participatory approach to prepare the sector's strategic and operational plans. AOPs are developed in a consultative manner which involves holding forums and workshops with key stakeholders to collect their views. Input is sought from all levels of the health system, particularly from Provincial Health Management Teams (PHMTs) and District Health Management Teams (DHMTs), who collect plans from the facility level. The community's views are collected at the local level and channeled through the district, to be forwarded to the headquarters at MoH.

The planning currently being done by two parallel units needs to be harmonized to ensure coherent planning processes that are linked to sector and national priorities. The ministries have training programs for government officers involved in planning at the provincial and district levels, aimed at assisting them to participate effectively in the planning process. Training manuals produced by the

ministries have been useful in the training of provincial planning teams. There are follow-ups organized by the ministries to ensure that planning at the local level is conducted appropriately.

Implementation of the plans has been a key issue. The main objectives of the plans are not always achieved due to a lack of ownership at the lower levels as well as a resource allocation process that is not based on the priorities on the ground. Although the sub-national levels have been participating in the annual operational planning process for the last few years, the variations in need specified in these local level plans are not being reflected in the provincial or district final budgets and staffing allocations.

The private health sector, traditional healers, and community representatives are currently excluded from the AOP process. This means that their contribution to the health system and the services they are providing are not being factored into the plans for service provision at the national level.

In discussions with health management teams, the concept of the annual operational plans, where facilities, districts and provinces are planning according to needs, received mixed reviews. Respondents in Northeastern province recognized the value of the planning process but noted that the final budget allocation process was not transparent and was not aligned to the plans submitted. One respondent in Rift Valley said he thought that "our plan for the AOP is just thrown in a cabinet somewhere"; another noted that "these plans go to Afya house and gather dust." Although the AOP process is showing some benefit to provinces (particularly those like Northeastern and Coast that have health partner support to strengthen the AOP process), others are failing to see the utility of the process, as it is not proving useful in mobilizing adequate resources to support implementation of their work plans.

The Kenya national Health Act was reviewed last year. The review resulted in a report with clear change recommendations, which are yet to be implemented. What is clear from the review is that the laws and regulations governing the health sector are outdated. The sector laws need to be harmonized and aligned with current international standards.

Regulatory agencies for the health sector in Kenya include the Pharmacy and Poisons Board, medical professional bodies for doctors and nurses, and the Kenya Medical Supplies Agency (KEMSA). The regulatory agencies do not have adequate resources to enforce existing legislation and regulations; they have inadequate human, technical, and financial resources to deal with an increasingly sophisticated society. KEMSA and the Pharmacy and Poisons Board need to be strengthened by addressing these resource challenges. The professional associations are formed to advocate for their membership and to regulate licensure; they are not designed to regulate the practice of their members.

5.8 GOVERNANCE SUMMARY

There have been efforts by key stakeholders in the health sector— the government, the FBOs, and one civil society coordination organization—to strengthen governance of the health sector, through committees such as Sector Wide Approach to planning (SWAp), Health Sector Coordinating Committee (HSCC), Health Sector Steering Committee (HSS-SC), and Systems Support. Several systems and technical ICCs provide coordination and oversight functions, while HSCC and HSS-SC provide policy development and planning functions. In addition, a Code of Conduct for the ministries of health has been developed and is in use. There is also a joint financing agreement between donors and the GOK. There are other mechanisms that clearly demonstrate stakeholder participation in setting the health policy agenda in Kenya.

These successes notwithstanding, coordinating the activities of these committees is not an easy task, with extensive duplication of functions. There are legislative weaknesses in the sector, documented in

the report on the review of the regulatory framework (GOK 2009c). The health information and data collected rarely inform health policy.

Given these weaknesses, there is a need to consider merging the HSCC Steering Committee with JICC, to avoid duplication of the responsibilities and to speed up policy development and planning for the sector. There is a need for the government to bring in the interested stakeholders, such the private sector and civil society organizations, and to provide incentives to strengthen their participation in the sector policy process and planning. There is a need for the government to consider filling the legislative gaps identified in the Proposal and Roadmap report. There is also a need to reduce the number of ICCs, as their memberships overlap.

6. MEDICAL PRODUCTS MANAGEMENT

6.1 BUDGETING

We evaluated budgeting and budgetary allocations as a pointer to the financial and institutional sustainability of the pharmaceutical system. Four indicators were examined: government expenditure on health; the proportion spent on pharmaceuticals; per capita expenditure on pharmaceuticals; and private expenditure on pharmaceuticals. However, because recent data are lacking on expenditure on pharmaceuticals in both the private and public sectors, we could only draw general inferences for these indicators based on overall expenditure on health.

Provision of pharmaceuticals in Kenya is financed by the government through the health ministries, assisted by a number of development partners (who give cash or medical commodities and technical assistance), and by the private sector. Further funding is obtained from cost–sharing, commonly called the Facility Improvement Fund (FIF) in the public sector and "fees for service" in the faith-based hospitals. These cost-sharing programs result in substantial out of pocket (OOP) expenditure on medicines at pharmacies.

Exhaustive estimates on expenditures on pharmaceuticals are not available. The Government of Kenya Economic Survey 2010 estimates the value of medicines and pharmaceuticals consumed locally at Ksh 17.8 billion (based on local production plus imports less exports). However, for 2008/09 the total allocated budget for "drugs and dressings" was only about Ksh 3.3 billion, or 12.1 percent of the total MOH recurrent budget, at approximately 1.1 USD per capita (GOK 2009d). However, a lot of medicines are purchased off-budget and by the private sector and used in both the public and private sectors.

For comparison, WHO estimates the level of public sector funds needed to provide essential medicines in a basic health care package at around US$ 1.5-2 per capita. The MOH allocation of US$ 1.1 per capita is thus inadequate. Moreover, based on national estimates obtained through quantification and estimation of needs, about Ksh 7.3 billion is required for pharmaceuticals annually, but less than 2 billion is made available.

6.2 PHARMACEUTICAL POLICY, LAWS AND REGULATION

6.2.1 PHARMACEUTICAL POLICY

Kenya published its first national medicines policy in 1994, articulating its goals for the pharmaceutical sector and the main strategies for attaining them. The expected outcomes of the 1994 policy were not realized due to lack of a comprehensive implementation plan (EHG 2009b). Key reasons cited for the poor implementation of the policy include a poorly developed implementation plan; lack of management support; weak institutional structures and systems; and lack of funding for the strategies outlined in the document. The department of pharmacy, in the ministry of medical services, is responsible for providing stewardship for the development, coordination and implementation of the policy. At the time of this assessment, the second national pharmaceutical policy (KNPP) was near completion and awaiting official

authorization. An implementation plan for this policy has already been developed and is awaiting ratification.

6.2.2 PHARMACEUTICAL LAWS AND REGULATION

Pharmaceutical laws and regulations are embodied in various acts. This leads to a piecemeal approach which results in gaps, inconsistencies, and conflicts (HERA 2005a, 2005b).

The Pharmacy and Poisons Act (Cap. 244), the main law governing the pharmaceutical sector in Kenya, was enacted in 1957 to regulate the manufacture and trade of drugs and the practice of pharmacy. The Act has never been comprehensively reviewed to reflect changes in technology and advances in the practice of pharmacy. Some piecemeal amendments have been effected, including the introduction of drug registration (1981), changes in the Pharmacy and Poisons Board (PPB) and the establishment of the National Drug Quality Control Laboratory (1992). These amendments, however, have inadvertently introduced further inconsistencies. Other laws that have a bearing on the pharmaceutical sector are listed in Annex F.

Recommendations have been made calling for a single Medicines Act to provide a comprehensive regulatory framework to ensure efficacy, safety, and quality of medicines and to address key issues such as trade, pricing, and rational use (EHG 2009a). In addition, informant interviews stressed that the trade in medicines and the practice of the pharmaceutical profession should be regulated under different structures, and that the numerous Acts governing the individual health professions be replaced by a single Health Professionals Act.

The Parliamentary Departmental Committee on Health is currently conducting an inquiry on the pharmaceutical sector focusing on key areas: importation and trade of pharmaceuticals and non-pharmaceuticals; gaps in the commodity supply chain; and the alleged importation of counterfeit pharmaceuticals. The committee intends to introduce amendments to the Pharmacy and Poisons Act (Cap. 245) and other statutes with the broad objective of modernizing the regulation of the industry and addressing existing gaps in the statute.

6.2.3 NATIONAL DRUG REGULATORY AUTHORITY- PHARMACY AND POISONS BOARD

The Pharmacy and Poisons Board (PPB) serves as the national drug regulatory authority responsible for promulgation of regulations and enforcement of the Pharmacy and Poisons Act. The PPB was established by Cap. 244 in 1957, as a department within the ministry of health. An amendment in 1993 enabled the Board to convert to a body corporate. Although the intent was to make the board fully autonomous, other conflicting sections of the law prevented this.

During this assessment, stakeholders expressed their reservations regarding the performance of the PPB and its ability to fulfill its mandate. The key challenges highlighted include:

- Lack of adequate enabling legal framework
- Conflicting responsibilities between the board and other government agencies (e.g., the National Quality Control Laboratory and the Drug Inspection Unit within the Ministry of Medical Services)
- Inadequate autonomy to undertake its functions
- Inadequate staff capacity
- Lack of an organizational structure specific to the Board's mandate

A task force was appointed in April 2006 by the Permanent Secretary (Ministry of Health) to review the operations of the Board, with specific terms of reference to make the Board independent, efficient, and responsive to present and future challenges. The team made a number of recommendations, including: reorganization of the board to make it more efficient; proposals for terms and conditions of service for staff; financing mechanisms/ sources of financing; systems for financial regulations and procedures; and amendments to the Pharmacy Act (MOH 2007). Implementation of these recommendations is pending.

6.2.4 PHARMACEUTICAL REGISTRATION

A system exists for drug registration, to authorize the marketing of pharmaceuticals. Legal notice no. 147 (1981) first required registration for the importation or manufacture for sale of drugs in the country. The PPB accordingly set up a drug registration department. Two expert committees manage the registration processes: the drug registration committee (human), and the drug registration committee (veterinary). The board charges fees for registration of products, and renewal is required every five years.

Although established procedures to guide the registration of pharmaceuticals exist, they were last reviewed in 2005/06 and require to be updated.

The average time for completing registration is about 6-12 months, which compares favorably with similar regulatory authorities (WHO 2004). There are however, challenges in maintaining the register of products. It is not possible for the secretariat to track the status of registration of products, to determine when re-registration is due, or even to distinguish between unregistered, pending, refused, and registered dossiers.

The board is financially independent and finances its operations from fees levied for various services. Total revenue collected for the years 2006 and 2007 was approximately USD 1.46 and 1.8 million respectively[8]. The PPB retains this revenue, and the government pays staff salaries.

Stakeholders interviewed expressed concern over the high number of products registered in the country, making it difficult to track legally registered products and to distinguish them from illegal ones. Moreover, there are too many suppliers in the marketplace, driving down price and quality; virtually all levels in the supply chain are characterized by a high degree of competition and fragmentation (Barnes 2009).

6.2.5 POST-MARKETING SURVEILLANCE

A system for collecting data regarding the efficacy, quality, and safety of marketed products was inaugurated in June 2009. The Department of Pharmacovigilance and Post Market Surveillance (MOMS PPB 2010) is responsible for collecting, collating, and analyzing these data. Currently the system addresses medicine safety issues (Pharmacovigilance) mainly by collecting Adverse Drug Reaction (ADR) reports, although some limited work is also being done on monitoring the quality of products in the market. A passive, self-reporting system is used to collect data. The Department also routinely carries out active (or proactive) post-market surveillance of various medicines in Kenya. A system for communicating safety information through email alerts, called the E-Shots, has been implemented.

The main challenges faced in rolling out a system for post-market surveillance are the following:

- lack of adequate staff
- inadequate funding
- an extremely slow response from the NQCL in analyzing post-market surveillance samples (often 6-

7 months)

- slow response by the Pharmaceutical Inspectorate and Good Manufacturing Practice Departments in taking regulatory action (recalling/ withdrawing affected products; carrying out audits)

6.2.6 LICENSING, INSPECTION, AND CONTROL

Mechanisms exist for enforcing regulations aimed at ensuring the quality of pharmaceuticals on the market. Key components of this mechanism include: systems for licensing pharmaceutical personnel; and the licensing, inspection and control of manufacturers, distributors/importers and pharmacies/drug retail outlets.

- The Training and Assessment Department within the PPB is responsible for registering pharmacists and pharmaceutical technologists, and issuing annual practice licenses.
- The Pharmaceutical Inspectorate Department is responsible for inspecting manufacturing industries and retail, wholesale, and distributorship outlets (pre-licensing and post-licensing); issuing licenses for retailers, distributors and pharmaceutical manufacturers; and generally enforcing quality assurance systems.

It emerged from the assessment that the number of technical staff is inadequate to conduct all the inspection activities. Moreover, not all of them have received appropriate training, especially for specialized inspections such as the good manufacturing practice inspection of manufacturing premises. In addition, there are two inspectorate units—one based at the PPB and another at MOH—with overlapping jurisdiction.

6.3 SELECTION OF PHARMACEUTICALS

The assessment of systems for selection of pharmaceuticals evaluated: the availability and use of essential medicines list(s) (EML); procedures for updating the EML; and the content of the EML. Information was obtained from key respondents at the Department of Pharmacy, from pharmacists working in priority health programs in the Ministries of Health, and from documents provided by technical assistance partners and ministries.

6.3.1 AVAILABILITY OF A NATIONAL MEDICINES LIST

Kenya has developed and printed three EMLs, in 1989, 1993, and 2003. At the time of this assessment, a new EML was nearly final and was expected to be launched later in the year. The draft of EML 2010 is based on national standard clinical guidelines (SCG) and identifies medicines by level of care (as defined in the KEPH). According to the department of pharmacy, the EML is revised on average every five to seven years. Previous EMLs had also been derived from national SCG, but only EML 2003 identified medicines by level of care (MOH 2003).

There are several main improvements in the current EML over the previous edition. EML 2010 features

- Medicine needs defined at the community level
- More pediatric friendly formulations
- A complementary list of pharmaceuticals

- Use of VEN (vital, essential, and non-essential) categories[19]
- The World Health Organization (WHO) format

At the national level, the Kenya EML guides procurement, although not all medicines listed are procured. However, the EML is rarely used to guide facility-based procurement of medicines. Some of the reasons suggested by key respondents were poor dissemination of the EML, lack of clear guidelines and understanding of the use of the EML, and influence from the pharmaceutical industry (MOMS & MOPHS 2010b).

6.3.2 NUMBER OF PHARMACEUTICALS IN THE EML

The EML 2010 list contains 273 pharmaceutical moieties, listing all products by generic name. There are a total of about 400 pharmaceuticals by dosage form and strength. Table 19 summarizes the number of pharmaceuticals by level of care.

TABLE 19. NUMBER OF PHARMACEUTICALS BY LEVEL OF CARE IN THE KENYA ESSENTIAL MEDICINES LIST 2010

Level of Care	Number of Active Ingredients (Pharmaceutical moieties)	Number of Pharmaceuticals (by dosage form and strength)
Level 1 (Community)	6	7
Level 2 (Dispensary/ Clinic) & Level 3 (Health Center)	108	171
Level 4 (District/ Sub-district Hospital)	228	340
Level 5 (Provincial Hospital)	267	391
Level 6 (Referral Hospital)	273	396

Source: MOMS & MOPHS 2010b.

6.3.3 PROCESS FOR MAINTAINING THE NATIONAL EML

The responsibility for review of SCG is vested in the office of the Director of Medical Services, who is also the chair of the National Medicines and Therapeutic Committee (NMTC). This committee is responsible for managing the process of maintaining and reviewing the EML and SCGs. Although the committee was envisioned in 2004, it was not officially launched until 2009 and has yet to become fully operational. Membership in the NMTC is representative of the broad pharmaceutical sector and includes public, private and faith-based sectors as well as training institutions. The NMTC has written terms of reference.

Although planned, there are no standard operating procedures (SOPs) for the review of the EML or defined systems for dissemination to facilities. The NMTC actively participated in development of the current EML with other stakeholders, as part of an advisory team to the ministries of health that recommended final adoption of the EML after stakeholder inputs.

According to respondents from the Department of Pharmacy, the NMTC has access to unbiased relevant scientific data primarily through members drawn from training institutions. Relevant reference materials are also made available from the Department of Pharmacy.

[19] The VEN system sets priorities for selection, procurement, and use of vital, essential and nonessential drugs according to the potential health impact of individual drugs.

6.4 PROCUREMENT

Historically, procurement of medicines was undertaken by KEMSA (or its predecessors), while the MOH procured medical supplies and equipment. Following recommendations from the Report of the KEMSA Task Force (October 2008), procurement of both medicines and supplies (pharmaceuticals) was handed over to KEMSA (MOH 2008b).

6.4.1 GUIDELINES, SOPS AND USE OF GENERIC NAMES FOR PROCUREMENT

Procurement of pharmaceuticals is guided by the provisions of the Public Procurement and Disposal Act 2005 and the Regulations of 2006. A specific health procurement guideline was developed in 2008-2009. Procurement Standard Operating Procedures exist and were reviewed and updated in 2009. A review of KEMSA's procurement process by the MOH's Supply Chain Oversight Committee in November 2009 found these SOPs in use. KEMSA's specifications on the tender documents use generic names exclusively. Moreover, procurement is limited to the Essential Medicines List, which is derived from the most current Standard Clinical Guidelines or treatment policies for the vertical programs.

6.4.2 PROCUREMENT—NUMBER AND COMPETITIVE BIDDING

On average, 95 percent of KEMSA procurement for essential medicines and medical supplies is through competitive bidding. The remaining 5 percent is usually for repeat/non-responsive tenders or for life-saving drugs that require pre-qualification. Moreover, KEMSA's procurement prices have been found to be cheaper than the prevailing international prices or those of selected local manufacturers and distributors, indicating that the agency has succeeded in procuring items at cost-effective prices, thereby achieving value for public money (MOMS & MSH/SPS 2008b).

On average 25–30 procurements are conducted each year. Currently this includes the different procurements necessitated by the split of the Ministry of Health: each Ministry releases funding separately, and tendering is therefore done separately. The split has exacerbated the lack of a consolidated annual procurement plan.

The Public Procurement and Disposal Act 2005 has provision for multi-year procurements through contract frameworks. The 2009–2010 procurement has exploited this opportunity to procure for two years. This is expected to reduce the workload from repetitive tendering of similar items, enhance scheduled deliveries, and encourage price negotiations. Market intelligence gathering has not received adequate attention due to HR constraints; KEMSA mainly uses comparisons with previous tender prices, as well as price indicators from other procurement agencies, to determine the competitiveness prices. The average lead time for KEMSA procurements is nine months. For the last three years (07-08; 08-09; 09-10) there have been no emergency procurements. For those years, 80 percent, 85 percent, and 90 percent (respectively) of items on the tender were actually procured.

Several procurement and supply chain systems exist for HIV related commodities for various funding sources. Every 2 years national forecasting and quantifications exercises are held for HIV commodities and annual revisions conducted. This is done separately from other national health commodities. Current supply chain systems for HIV commodities are not integrated into general supply chain systems for essential drugs for general health care. Data on STIs is minimal making quantification for STI commodities difficult and hence not adequately covered in the Medium Term Procurement Plans.

6.4.3 SUPPLIER PRE-QUALIFICATION

The Procurement Unit at KEMSA has not fully established and implemented a supplier performance tracking system for the pre-or post qualification process, to rate suppliers and products based on review of objective information about product safety, efficacy, and quality. However, all drugs procured are registered with the PPB, and samples are requested and tested as part of the procurement process. KEMSA has an in-house quality control laboratory, but the bulk of testing is undertaken by the National Quality Control Laboratory, a WHO pre-qualified unit.

6.4.4 QUANTIFICATION

Quantification at national level is conducted only periodically, utilizing consumption data from previous years. The last three national quantification exercises were conducted in 2001, 2005/06, and 2009. However, these exercises were greatly constrained by inadequate and inaccurate data, at both KEMSA and the health facilities. The quantification in 2009 estimated requirements for pharmaceuticals at Ksh 7 billion (US$ 90 million) against an allocation of just Ksh 2 billion (US$ 26.7 million), leading to a major shortfall in funding for medicines and supplies. (It should be noted that this quantification does not take into account items such as ARVs and antimalarials.) A recent publication estimates that KEMSA is meeting only 21 percent of the demand for medicines and medical supplies (World Bank 2009).

Records on drug usage are poor at all levels of the supply chain (MOMS & MSH/SPS 2008) Further, the planning system does not function well, with widespread and frequent stock-outs. Consequently, it is difficult to compare actual procurement quantities and costs with estimates, which makes procurement inefficient.

6.5 STORAGE AND DISTRIBUTION

Storage and distribution practices were assessed by evaluating the use of the push or pull systems; existence of independent supply systems for vertical programs; quantifying inventory losses; and the presence of appropriate infrastructure for storage.

6.5.1 DISTRIBUTION

Distribution includes issues of government financing, which is highly inadequate. Distribution of pharmaceuticals is undertaken through KEMSA, with about 90 percent of transportation of deliveries being outsourced. KEMSA has entered into some arrangements with development partners (like UNICEF) where partners issue payments to KEMSA to ensure that goods procured by development partners are distributed.

Until 2005, distribution of pharmaceuticals in Kenya was largely managed through a push system. In 2005, a pilot pull system was introduced in two provinces (Coast and North Eastern), with support from DANIDA. The success of the pilot led to roll-out of the pull system to all the hospitals (KEPH levels 4 & 5); coverage currently stands at 30 percent. The planned phased roll-out of the pull system has stalled, however. A recent assessment (EHG 2010) identified the following constraints:

- Insufficient funding for essential medicines and medical supplies procurement
- Too many items included in the pull system
- No safety stocks kept at any level

Most respondents during this assessment agreed that the push system is highly inefficient, especially in the absence of an organized reverse logistics system. They urged complete roll-out of the pull system to all facilities in the country. They also emphasized that, although distribution plans are drawn every quarter for rural health facilities and bimonthly for hospitals, the plans are rarely circulated to the facilities due to shortage of stocks at KEMSA. Consequently, facilities are not always aware of the delivery schedules and cannot make prior arrangement for receipt of supplies from KEMSA.

6.5.2 INDEPENDENT SUPPLY SYSTEMS FOR VERTICAL PROGRAMS

Although independent supply systems exist, especially for ART commodities, the supply system is to a large extent integrated. KEMSA still remains the principal distributor; even those vertical programs that have a different distribution system, such as the Division of Vaccines and Immunization (DVI) & the ART program, still utilize the agency to some extent or in certain situations to distribute commodities. . The Ministries of Health are not involved in distribution planning. Except for the Global Fund, donor partners do not fund distribution of commodities.

6.5.3 INVENTORY LOSSES

There are no accurate records of inventory loss resulting from expiries, damage, quality issues, and obsolescence. Data at both KEMSA and the health facility level are incomplete, inadequate, or sometimes unavailable. This was highlighted by a survey of the extent of health commodity leakage and wastage in the public sector medical supply chain system carried out in 2008, and confirmed in interviews with key informants (MOMS & MSH/SPS 2008a). Moreover, no established reverse logistics or re-distribution system exists to allow non-usable items to find their way back into KEMSA. Supplies in KEMSA warehouses may have been procured at different time periods. At the time of this assessment, the value of expired, obsolete, and non-usable items at KEMSA for 2008-2009 was placed at Ksh 366 million, of which 348 million was non-government procurement, for a throughput of about Ksh 12 Billion. This puts the loss value at about 3 percent.

6.5.4 EQUIPMENT FOR COLD STORAGE

All KEMSA warehouses and depots have functional temperature-controlled storage with sufficient capacity. However, this assessment found that many of the lower level facilities (KEPH level 2 & 3) do not have sufficient cold storage; most of them store medicines in fridges intended for vaccines. The outsourced transportation vehicles are not fitted with equipment to maintain the cold chain, so products that require cold chain are transported in cold boxes by courier.

6.6 APPROPRIATE USE OF PHARMACEUTICALS

Appropriate use of medicines was measured by using three indicators: functioning mechanisms and tools for improving medicines in health facilities; availability of SCG; and the use of SCG for pre-service and in-service training.

6.6.1 EXISTENCE OF MECHANISMS/TOOLS TO IMPROVE THE USE OF MEDICINES IN HEALTH FACILITIES

In 2007, the Ministry of Health issued a policy statement requiring all public health hospitals to constitute Medicines and Therapeutic Committees (MTCs). District Management Teams were expected to provide similar oversight for dispensary and health centers.

Since then, various reports indicate that there are MTCs in public health facilities but that they differ in functionality. According to the Ministry of Medical Services Supervision and M&E report (July-September 2009), only 10.1 percent of facilities visited (16 out of 159) had functional MTCs (MOMS 2009). Functional MTCs were defined as those that had monthly meetings. A recent assessment of appropriate medicines use practices in the public health sector found that, of 24 facilities visited, 19 (80 percent) had constituted an MTC, but less than two thirds had functional MTCs (EHG 2009b). An MTC was considered functional if it had frequent meetings, as well as minutes of meetings, terms of reference, an action plan, and a documented drug use evaluation activity. Most of these MTCs had been constituted following the 2007 MoH directive.

According to respondents, MTCs have been active in some large private hospitals in Nairobi for more than a decade. Little is known or documented about MTCs in faith-based facilities. A representative from the AIDS relief consortium indicated that of 29 FBO facilities supported, 13 had MTCs that had met at least once in the last quarter. At the time of this assessment, none of the respondents interviewed were aware of any MTC network.

The Ministry of Medical Services published and disseminated formularies for health centers and dispensaries in 2009. To date there is no documentation of how many facilities received the formularies. The national referral hospitals have also developed their own formularies, including a few private hospitals. There are no regular national or regional reviews of prescribing patterns. However, at the facility level, this is usually an activity expected of MTCs.

The newly developed National Appropriate Medicines Use guidelines describe standards for prescribing. However, for the most part, controls on prescribing are developed at the facility level and may differ from one practice setting to another (MOMS & MOPHS 2009c).

6.6.2 AVAILABILITY OF NATIONAL CLINICAL GUIDELINES

There have been two National Clinical guidelines published, in 1994 and 2002. Like the EML, the 2010 National Clinical Guidelines were not in print at the time of the assessment. These guidelines, in three volumes, were developed in line with the KEPH. Volume I is for use at the community level, Volume II targets levels 2 and 3 facilities, while Volume III is for hospitals (levels 4 to 6). The National SCGs include treatment issues for all conditions including for vertical programs (MOH 2002, MOMS & MOPHS 2010a). Stand-alone treatment guidelines are also available for priority programs such as TB, Malaria, HIV/AIDS, and Reproductive health.

The SCGs are used to develop EMLs, including the most recent version, and are developed based on unbiased relevant scientific information. The National SCG is in use, however, respondents indicated that its use by health care workers has been severely limited because it has not been widely disseminated. This was attributed to lack of a robust system for distribution, as well as printing only very few copies.

6.6.3 USE OF NATIONAL CLINICAL GUIDELINES FOR PRE-SERVICE AND IN-SERVICE TRAINING

Key respondents at the Ministry of Health indicated that the medical, nursing and pharmacy schools frequently request standard clinical guidelines for students, but these are scarce or not available.

All vertical programs—such as TB, HIV/AIDS, Malaria, Reproductive Health, and Prevention of Mother-to-Child Transmission (PMTCT)—use clinical guidelines for in-service training. Curricula are available and are in use. These trainings are usually multidisciplinary; they target clinicians, clinical officers, laboratory technicians, and pharmacy and nursing staff. A desktop review of support supervision and

the M&E checklists from the MoMs, NASCOP, DOMC, DLTLD, and Reproductive Health revealed that availability and use of guidelines are among the indicators reviewed during visits to facilities.

An assessment of pharmaceutical systems in public sector sites in Nairobi province found that, of 47 facilities visited, guidelines were seen and available in less than 12 (27 percent) (Chuchu 2006). There are no national or regional studies that examined compliance with SCG.

6.7 AVAILABILITY AND ACCESS TO QUALITY PRODUCTS AND SERVICES

From discussions with stakeholders and a review of previous assessments, it emerged that access to facilities that dispense medicines is generally estimated to be good in urban areas but relatively poor in rural settings. Estimates of accessibility vary. One report defines geographical access as up to one hour walking distance, indicating that 50 percent of the population has access to public health facilities, 70 percent to private health facilities, and 80 percent to retail outlets (HERA 2005a). However, this fails to highlight the significant variations that exist between urban and rural settings and between various regions in the country.

Similarly, access to private drug retail outlets (pharmacies) is variable. There are about 970 pharmacies registered with the PPB, which translates to one pharmacy serving about 40,000 people. These are unevenly distributed, however, with the majority located in urban areas. In addition, this assessment found an even bigger (indeterminate) number of illegal/unlicensed outlets throughout the country, indicating an unmet need for registered pharmaceutical services. One study estimates that there are over 6,000 dispensing outlets, of which over two thirds are operating without a license and need to be shut down (Barnes 2009). Although these outlets provide services to populations that would otherwise lack access to medicines, the standard of services and quality of medicines sold cannot be verified.

There is no evidence to suggest that the government has developed a clear strategy to address this inequitable distribution of facilities/ retail outlets. Although the 2004 Kenya National Drug Policy states that incentives will be developed to encourage the establishment of pharmacies in underserved areas, it appears that no activities in this regard were pursued. The draft 2008 Kenya National Pharmaceutical Policy is silent on this issue.

With regard to access to qualified pharmaceutical personnel, the numbers of pharmacists and pharmaceutical technologists have increased over time but are still insufficient relative to the population's needs. The number of pharmacists has increased from 1866 (2002) to 2775 (2008), while pharmaceutical technologists have increased from 1399 (2002) to 2324 (2009)—increases of 48 percent and 66 percent respectively (FIP 2009). It is estimated that there is only one pharmacist/pharmaceutical technologist for every 10,153 persons—approximately 0.1 per 1,000 persons (MOPHS & MOMS 2010d). Moreover, pharmaceutical personnel are inequitably distributed across the country, with the majority concentrated in the private sector and in urban areas. The distribution of pharmacists and other health personnel in the public and private sectors is shown in Table 20.

TABLE 20. ESTIMATES OF HEALTH PERSONNEL IN THE PUBLIC AND PRIVATE SECTORS, 2007, 2008

Cadre	Total Registered	Public Sector (2008)	Public Sector (% of total)	Private Sector	Private Sector (% of total)
Doctors	6271	1605	26%	4666	74%
Dentists	631	205	32%	426	68%
Pharmacists	2775	382	14%	2393	86%
Pharmaceutical Technologists	1680	227	14%	1453	86%
Nursing Officers	12,198	3013	25%	9185	75%
Enrolled Nurses	31917	11679	37%	20238	63%
Clinical Officers	5797	2202	38%	3595	62%

Source: Barnes 2009.

During this assessment, respondents offered recommendations for pharmacy curricular reforms and for restructuring both middle level colleges and university departments, to align the skills of the pharmacy graduates with the needs of the market, especially in the areas of pharmaceutical management and care.

6.8 FINANCING FOR PHARMACEUTICALS

6.8.1 MAPPING- FINANCING OF PHARMACEUTICALS

Kenya relies on a diverse set of financing mechanisms for pharmaceuticals, including public financing through the MOH budget, subsidized user fees at public facilities, donor contributions, and direct private spending or indirect spending through insurance programs. Government expenditure on medicines and medical supplies has increased, from 10.6 percent (2004/05) of the total MOH recurrent expenditure to 12 percent (2008/09). (See Table 21.)

TABLE 21. PERCENT SHARE OF TOTAL MOH RECURRENT EXPENDITURES THAT GOES TO MEDICAL SUPPLIES

Fiscal year	2004/05	2005/06	2006/07	2007/08	2008/09
Drugs and medical consumables	10.6	10.5	11.1	11.6	12.1

Source: GOK 2010.

Current accurate estimates of donor support and private sector spending on pharmaceuticals are not available. Evidence suggests that there is a substantial gap in the financing of pharmaceuticals, with significant levels of out of pocket expenditure on medicines. Available figures for 2005/06 indicate that approximately 1.4 percent of household expenditures went for purchasing medicines at pharmacies, to meet the financing gap (GOK 2009b).

6.8.2 UTILIZATION OF FACILITY USER FEES FOR MEDICINES

Subsidized user fees, levied for services at health facilities, go to the Facility Improvement Fund (FIF). The specific services and the amount of the fee depend on the type of facility and level of care. MOH allows higher level facilities (level 4 and above) to charge fees for dispensed medicines. Lower level facilities can only charge a single standard flat fee (Ksh 10-20) for all services rendered. The money collected is then used for procurement of services and goods including pharmaceuticals. The FIF fund is increasingly being used for procurement of medicines, to plug the gap resulting from insufficient supplies

from KEMSA. During this assessment, it emerged that between 30 and 60 percent of FIF is now utilized for procuring pharmaceuticals and medical supplies.

6.8.3 MECHANISMS FOR CONTROLLING THE PRICE OF PHARMACEUTICALS IN THE PRIVATE SECTOR

Currently there is no mechanism for price control in the private sector. The 2004 KNDP had proposed measures for making medicines more affordable. This included exploring alternatives to the current tariff (percent mark-up) system for compensating pharmacists/pharmaceutical technologists, as well as requiring drug distributors and manufacturers to provide their local wholesale price list to MOH according to an established schedule, which would be published at least yearly to encourage cost awareness. However, there is no evidence of any attempt to implement these measures. The draft 2008 pharmaceutical policy also addresses this issue and proposes the development of a National Medicines Pricing Policy, to "guide ethics and practices in pricing with the overall aim of improving affordability."

6.9 MEDICAL PRODUCTS MANAGEMENT SUMMARY

In general, the existing institutional framework to carry out medical products management functions requires strengthening at all levels. Shortage of staff to support various functions is a challenge. Increasingly, there is a need to strengthen pre-service training at the tertiary level, to align skills with the requirements of the health sector. Low budgetary allocation to support the Medium Term procurement plan was found to be a significant contributor to drug shortages at public health facilities. Other key findings include:

- There are several distribution systems for pharmaceuticals, and both pull and push systems are in use. Although all facilities were to be transitioned to the pull system, about 3200 (70 percent) are still on the push system. Challenges experienced in the roll-out of the pull system resulted in halting further expansion in 2009. The push system results in shortages of many drugs, while others are in such over-supply they expire on the shelves.
- The policy and regulatory framework is weak. A comprehensive law is needed to address all policy and regulatory issues in the pharmaceutical sector. Currently the sector is governed by piecemeal legislative acts, resulting in confusion and conflict.
- There are clear systems for registration of pharmaceuticals, managed by the Pharmacy and Poisons Board (PPB). However, the efficiency of the registration process needs improvement.
- A pharmacovigilance system has recently been put in place at the PPB. Strategies to strengthen post-marketing surveillance are being evaluated.
- Although Kenya has published four essential medicines lists (most recently in 2010), the responsibility for managing this function has not been clearly documented. Furthermore, there are no written standard operating procedures to guide the development and maintenance of the essential medicines list (EML). The National Medicines and Therapeutics Committee (NMTC) has now been mandated to lead these processes, but it will have to be strengthened in order to perform this role effectively.
- Mechanisms are weak for promoting appropriate use of medicines, at the national level and the health facility level. Although the third edition of the national standard clinical guidelines has recently been published and Standard Clinical Guidelines (SCGs) for vertical programs exist, the mechanisms which are responsible for ensuring compliance to these SCGs, such as Medicines and Therapeutic Committees (MTCs), are either weak or not functional in most facilities and require strengthening.

- Significant gains have been made in improving the role of KEMSA (Kenya Medical Supplies Agency) in procurement for the public sector. Procurement SOPs for pre- and post-qualification of suppliers, quality control, tendering and tender evaluation are in use in KEMSA. Over 95 percent of procurements are done through competitive bidding, resulting in comparatively better prices. However, systems for supplier pre-qualification and performance tracking remain weak.
- The Medium Term Procurement Plan attempts to undertake a national quantification for essential medicines. However, this is yet to be institutionalized to make it more regular and link the same to annual procurement plans. Apart from vertical programs (TB, HIV, Malaria and Reproductive Health), there is no data for quantification at central level.
- There are variations in access to pharmaceutical services and availability of medicines; some areas, especially in rural setting, are underserved.
- There is still a significant gap in the financing of pharmaceuticals, despite the utilization of a diverse set of financing mechanisms. In public facilities, user fees are increasingly being used to procure pharmaceuticals. Out-of-pocket and house-hold expenditures contribute significantly to the total annual national expenditure on medicines.

It is encouraging to note some of the gains in the pharmaceutical sector—in particular, progress on the revision of the Kenya National Pharmaceutical Policy, the Pharmacy and Poisons Act, the review of SCGs and the EML, and strengthening of the NMTC and the delegation of procurement functions to KEMSA. These will provide a strong governance pillar to support pharmaceutical sector interventions.

7. HEALTH INFORMATION SYSTEMS

7.1 RESOURCES FOR HIS

7.1.1 GOVERNANCE

A national health information system (HIS) was first designed and piloted in the early 1970s. Since that time, demand for high quality health information—for health sector planning, management, monitoring, and evaluation—has continued to increase steadily. While system design and strengthening activities have contributed to progress over several decades, stakeholders both within and outside the government agree that the country's HIS has not been sufficiently responsive or effective in meeting evolving needs.

In more recent years, Kenya's Ministries of Health have produced a rich set of policy and framework documents to guide coordinated HIS strengthening, including an HIS strategic plan and HIS policy document, as well as a health sector M&E framework and standard operating procedures. These documents outline distinct roles and responsibilities for a wide range of HIS stakeholder groups. These include: MOMS/MOPHS units across health system levels; the private sector; FBOs; NGOs; other national Ministries; statistical bodies such as the Kenya National Bureau of Statistics (KNBS) and the Department of Civil Registration; research and training institutions; implementing partners; development partners; mass media; and Kenyan citizens.

To ensure technical oversight and stakeholder coordination, the HIS strategic plan and policy documents call for a high-level HIS coordinating committee, supported with financial and human resources from the Ministries of Health and stakeholders. Currently, however, short-term, ad hoc coordinating committees are organized around time-bound tasks. For example, in 2006, a 13-member committee coordinated multi-stakeholder involvement in the assessment of Kenya's HIS, using the Health Metrics Network (HMN) assessment tool. In 2008, as the earlier group had disbanded, a new multi-stakeholder group was formed to develop the HIS strategic plan and policy documents. While these ad hoc groups have successfully guided the completion of particular tasks, the absence of a sustained high-level coordinating committee is a key barrier to continued commitment and support from Government leadership and development partners in implementing activities and in sharing accountability for related results.

Kenya's HIS policy documents outline "compulsory and comprehensive" reporting on the part of all health care service providers; the standard operating procedures manual delineates standardized data collection and reporting forms, as well as roles and responsibilities related to the flow of data. A Memorandum of Understanding (MoU) has been signed between the GOK and the Christian Health Association of Kenya (CHAK), the Kenya Episcopal Conference (KEC), and the Supreme Council of Kenya Muslims, directing faith-based facilities to use the standardized data collection and reporting forms and to submit reports monthly to the District level and to FBO Secretariats. Within the private sector, complete and timely reporting is a challenge, as the incentive to report to the Government is weak. The National AIDS/STD Control Program (NASCOP) identifies a higher rate of private sector reporting when linked to receipt of key commodities such as HIV test kits and ARVs.

7.1.2 ORGANIZATIONAL STRUCTURE AND HUMAN RESOURCES FOR HIS

At the central level, the Division of Health Information Systems spans the Departments of Technical Planning and Performance Monitoring of both Ministries—a bridging structure that is unique to the Division of HIS. The HIS strategic plan and the health sector M&E framework identify key human resource needs for the Division, including staff skilled in epidemiology, biostatistics, research, systems/ICT management, and health economics.

The Division is comprised of 20 government-funded staff, including a newly appointed head (formerly the head of the Division of Disease Surveillance and Response (DDSR) within the MOPHS Department of Disease Control). Other staff include: five medical doctors, some with training in public health and/or epidemiology; 1 epidemiologist/nurse; 1 statistician; and 12 records officers. However, within and outside of the Division, there is recognition of an inadequate mix of skills among Division staff, such as lack of expertise in data analysis and information generation, and lack of expertise in information and communication technology (ICT).

At lower levels of the health system, Provincial Health Records and Information Officers (PHRIOs) and District Health Records and Information Officers (DHRIOs) are responsible for management, verification, transmission, and analysis of routine service data, as well as feedback of analysis and summary information to health facilities and other stakeholders. At the facility level, a Data Clerk and/or Records Officer is responsible for routine data capture and submission of monthly summary sheets. However, across Kenya's health system, there is an estimated vacancy of more than 4,000 records and information personnel (MOMS & MOPHS 2009g). A key human resource gap is the absence of Data Clerks/Records Officers at the health facility level, resulting in health care providers taking on these duties while already burdened by heavy service delivery workloads. Table 22, based on the HIS strategic plan, compares Kenya's health sector HIS human resource requirements with existing staffing levels.

TABLE 22. HIS STAFFING LEVELS (REQUIRED AND EXISTING)

Cadre	Total requirement	Existing staff	Gap
Health records and information personnel	4,882	572	4,310 (88%)
ICT officers	235	8	227 (96%)
Statisticians	221	0	221 (100%)
Epidemiologists	12	2	10 (16%)
Public health specialists	4	0	4 (100%)
Health economists	2	0	2 (100%)

Source: MOMS & MOPHS 2009g.

7.1.3 FINANCIAL RESOURCES

The 2006 assessment of Kenya's HIS, using the HMN assessment tool, identified as "not functional" the national budget line items for various sectors to provide adequately for a functioning HIS. The assessment identified a lack of financial and material resources available to program managers for collection and transmission of data, as well as limited resources to support PHRIOs and DHRIOs to carry out supervision and training of records and information personnel. At the central level, budget allocations for HIS fund staff salaries and basic operational costs of the Division of HIS. However, recurring costs (such as printing and distribution of registers and summary forms) and new costs (such as pilot implementation and scale-up of innovations) typically must be covered by development partners and donors.

As detailed in Table 23, Kenya's five-year strategic plan for strengthening the country's HIS is projected to require more than $25 million in financial resources. While the hope is that government funding will increase to support the planned activities, financial resources and technical assistance from development partners will be critical. Key partners currently supporting HIS strengthening include UNICEF, WHO, World Bank, DANIDA, PEPFAR (through CDC and USAID), DFID, EU, Clinton Foundation, Rockefeller Foundation, AMREF, Aga Khan Health Services, and the African Network for Health Knowledge Management & Communications (AfriAfya).

TABLE 23. PROJECTED FINANCIAL REQUIREMENTS TO IMPLEMENT

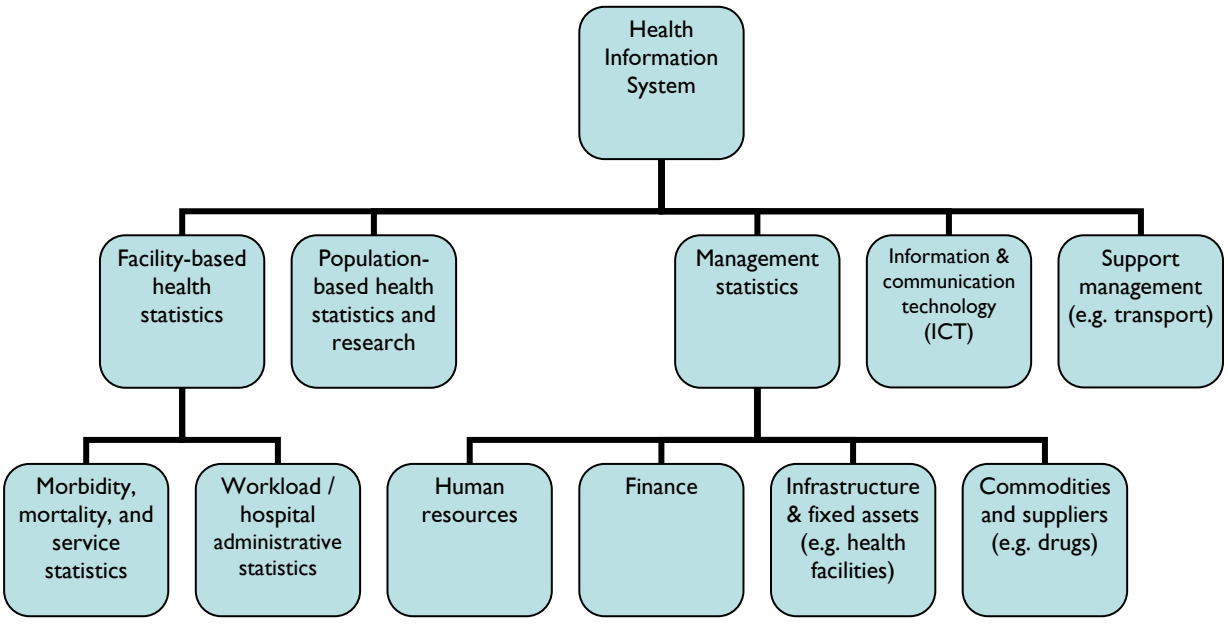
Strategic Objective	Budget over 5 years (USD)
Improve data management	11,850,426
Improve national vital registration system	2,229,461
Enhance capacity of HIS	3,159,333
Improve financial resources	203,093
Strengthen use and application of ICTs in data management	2,152,307
Improve monitoring, feedback, reporting, supervision, and data audits	5,387,040
Enhance governance, partnerships, collaboration, and coordination	253,267
Total	25,234,927

Source: MOMS & MOPHS 2009g.

7.2 HIS COMPONENTS

As detailed in Figure 11, the comprehensive organization of Kenya's HIS includes facility-based health statistics, population-based health statistics and research, management statistics, information and communication technology (ICTs), and support management.

FIGURE 11. ORGANIZATION CHART OF HIS



Source: MOMS & MOPHS 2009g.

7.2.1 CENSUS & VITAL STATISTICS

Kenya completed a national census in 2009, with results expected to be published in August 2010. The census was organized by the Kenya National Bureau of Statistics (KNBS) and mandated through The Statistics Act 2006. Kenya's Department of Civil Registration sits within the Ministry of State for Immigration & Registration of Persons, and linkages with the MOH's Division of HIS and the KNBS are weak.

It is estimated that Kenya's vital registration system captures only about half of all births and deaths within the country (MOMS & MOPHS 2009g). At the facility level, a birth registration form is usually completed by the nurse/midwife who attended the delivery, and a death certificate is completed by the Clinical Officer. If the facility has a Records Officer, this person will complete and/or validate the forms. These forms are then delivered to the District Registration Officer at least once a month. At the community level, the Community Health Worker (CHW) or area Chief will record births and deaths and report this information to the Community Health Extension Worker (CHEW) and/or catchment area facility.

7.2.2 SURVEYS

Kenya's most recent Demographic and Health Survey (KDHS) was implemented in 2008-2009, and the national dissemination workshop to release final results was held in May, 2010. The survey collected information on core variables related to maternal and child health and family planning, and included questions related to maternal mortality, women's status, domestic violence, female genital cutting, fistula, male circumcision, and tobacco use, along with HIV testing. In 2007, both a Malaria Indicator Survey (MIS) and an AIDS Indicator Survey (KAIS) were fielded, with final reports published in March and September 2009, respectively. The MIS documented progress towards Abuja targets and included measurements of parasitaemia and anemia levels in children. The KAIS was used as a baseline for development of Kenya's National AIDS Strategic Plan 2009/10–2012/13. It included measurement of HIV, HSV-2, and syphilis infection, as well as CD4 levels of persons infected with HIV (NASCOP 2009).

Also implemented in 2007, Kenya's Household Health Expenditure and Utilization Survey collected information on health care seeking behavior, health expenditures, and other common household expenditures (Kenya's Household Health Expenditure and Utilization Survey 2007). This survey was one source of data for Kenya's third round of National Health Accounts, published in 2009. Regarding service delivery, Kenya recently completed fieldwork for a Service Provision Assessment (SPA); Service Ability Mapping (SAM) was completed in 2004 (with the final report published in 2006). In addition, as part of the annual review and planning process of the NHSSP, the MOH conducts periodic Client Satisfaction Surveys of clients who access care and treatment at the facility level.

There are ongoing baseline assessments for intravenous drug user and men who have sex with men HIV prevalence surveys.

7.2.3 SURVEILLANCE

Integrated Disease Surveillance and Response (IDSR) is managed by the Division of Disease Surveillance and Response (DDSR) within the MOPHS Department of Disease Control. On a weekly basis, health facilities are to submit a standardized IDSR Weekly Epidemic Monitoring Form to the District Medical Officer of Health (DMOH). The form captures data related to a range of epidemic prone diseases, such as malaria, cholera, typhoid, and measles, as well as on acute flaccid paralysis and neonatal tetanus. The DMOH aggregates the facility submissions to create a District summary that is sent to the Provincial Medical Officer (PMO) and the DDSR. The DDSR produces weekly bulletins that are fed back to Districts. The MOH, in collaboration with WHO/AFRO, is producing a series of eight training modules

on integrated disease surveillance to build the capacity of District health teams in detection, reporting, analysis, investigation, response, monitoring and evaluation, supervision, and preparedness.

Kenya's Demographic Surveillance System (DSS) consists of five sites, one each in Kibera, Kilifi, Kisumu, Nairobi, and Rusinga. The Kilifi, Kisumu, and Nairobi sites are part of the INDEPTH Network. Across the five sites, USAID is supporting coordination and harmonization of data collection and management processes, including the collection and use of cause-specific mortality data using verbal autopsy and ICD-10 coding.

In addition to the five DSS sites, program-specific surveillance systems are in place. NASCOP directs an HIV/AIDS surveillance system with approximately 44 sites across the country. The HIV/AIDS surveillance system is supported by PEPFAR (through the CDC) in the areas of tool standardization, quality assurance, and data management and analysis. The MOH Division of Malaria Control supports a surveillance system in epidemic-prone areas. Within each area, about five facilities report regular surveillance information and analysis to the Division of Malaria Control.

The NASCOP in 2008 developed and launched a national plan for prevention, monitoring and surveillance of HIV drug resistance at a population level that is currently being implemented since 2009 with support from WHO and USG. However, death registries are not yet set up.

7.2.4 MASTER FACILITY LIST

As one of Kenya's most recent HIS developments, currently ongoing, the Master Facility List (MFL) aims to identify every health facility in the country using a unique identifier code. For each facility, the list will provide information on (among other parameters) the GIS coordinates, the facility level (1 through 6), services offered, facility ownership, and location (District and Province). It is expected that the MFL will contribute to the creation of an integrated health databank that produces more comprehensive information on health trends, efficiencies, and gaps, and that links service delivery/operational information with regulatory information. The MFL will also enable better harmonization of processes such as joint supervision visits and quality assurance assessments, as well as distribution of supplies.

7.2.5 ROUTINE SERVICE DATA – REPORTING, FEEDBACK, AND USE

The Indicator and Standard Operating Procedure Manual for Health Workers presents harmonized data collection and reporting tools for service delivery sites, including 12 registers for daily data collection and 15 summary sheets for monthly synthesis and reporting. Every month, service delivery points complete and submit to the District level the applicable paper summary form(s). Data are then transmitted from the District to national level through an electronic File Transfer Protocol (FTP) system. At the District level, the DHRIO aggregates the service delivery summary forms as Excel spreadsheets, based on harmonized District summary forms. The completed District summary spreadsheets are then uploaded to the FTP system or emailed to the central level, to be entered into the FTP system by a Records Officer within the Division of HIS.

Based on the aggregated District level summary data entered into the system, the FTP generates national level summary data. Summaries are organized by standardized MOH summary form or by topic-specific area (such as malaria or immunization), and can be disaggregated by Province and by year and month. At the Provincial level, PHRIOs can access the aggregated summary submissions of their Districts on a read-only basis. At the District level, the DHRIO has access to all summary forms submitted for that District and is able to update these submissions if needed.

It is intended for the FTP system to facilitate analysis and use of routine information, but this function is limited. The system includes information dashboard templates for PHRIOs and DHRIOs to build on, but

training on this function has been minimal, and the dashboards require manual linking of datasets to be functional. At the national level, the dashboard function is being used by the Division of HIS to produce draft tables for the forthcoming 2009 Annual Health Sector Statistics Report. Beyond this, however, access to the national level dashboards has been restricted, due to concerns that the tables and graphs are being copied into reports and publications without application of adequate data quality and validation checks.

The quality of data within the FTP is largely dependent on the quality of data received, aggregated, and submitted at the District level. DHRIOs are responsible for aggregating the data (either manually or through an improvised electronic system) in order to populate the District summary templates. While the Excel templates include protected cell functions and formulas, data entry errors and unintentional changes to cell functions are not avoided completely. A recent review of calendar year 2009 HIV/AIDS summary data within the FTP identifies common data transmission and cell formula errors. Examples include "invalid cell reference errors" resulting in missing data, broken formulas intended to produce cumulative numbers, and data entry errors such as zero units of blood screened but 100 units found to be HIV-infected (Health Systems 20/20 2010a).

According to the Division of HIS, the overall rate of reporting from facilities to Districts and from Districts to the FTP system is about 84 percent, a rate that has increased slowly but steadily over recent years. At any given time, however, the data available within the FTP may not reflect the full 84 percent of units reporting. This is due in large part to irregular entry of District summary data submitted via email to the Division of HIS (rather than uploaded directly to the FTP system). One estimate is that as much as half of all monthly District summary reports are emailed to the Division of HIS. Delays in entering this data have a significant impact on the availability of complete and timely data within the FTP.

Supportive supervision visits aim to improve and sustain timely reporting of complete and accurate data. Within a District, DHMTs are expected to visit all facilities at least once per quarter. At the Provincial level, a sample of facilities is visited each quarter. Similarly, at the national level, the Division of HIS conducts quarterly supervision visits for a sample of facilities within each Province. The HSA team's site visits, conducted at a limited number of facilities in three Provinces, found a range in the frequency of supervision visits. For example, a health center in Norhteast Province indicated that it had not received any supervision related to the collection and reporting of routine information, while a dispensary in Coast Province reported supervision visits at least once per quarter and as often as once per month.

A range of experience was also reported in relation to feedback of information from higher levels to lower levels, and use of information for planning, management, resource allocation, and monitoring and evaluation. During the Provincial/District visits, several service delivery units described information flow as one-way, from the facility level to the higher levels, with no feedback provided, and had a limited understanding of how the information is used once it is reported. In Northeast and Coast Provinces, however, the PHMTs described feedback and review of information during quarterly meetings with DHMTs. During these sessions, Provincial and District level data are reviewed and shared, challenges and gaps are identified, and strengthening interventions and follow-up actions are discussed. District level stakeholder meetings were also identified as platforms for information feedback and review and discussion of trends and findings, although one DHMT cited lack of funding to support such meetings, and several facilities reported that they had not participated in these meetings. Review and use of information was also reported to take place during regular facility staff meetings and meetings with facility management teams.

7.2.6 ADDRESSING SYSTEM FRAGMENTATION

Kenya's File Transfer Protocol (FTP) system is limited in its ability to meet the full spectrum of needs for timely and complete data collection, reporting, integration, analysis, dissemination, and use. These system limitations, coupled with development partner reporting requirements and practices, have resulted in the implementation of short term stop-gap measures as well as parallel information systems that contribute to a fragmented HIS. Examples of parallel health information systems include:

- Malaria Information and Acquisition System (MIAS), hosted by the MOPHS Division of Malaria Control
- Community-based Program Activity Reporting (COBPAR), hosted by the National AIDS Control Council (NACC)
- Kenya HIV/AIDS Program Monitoring System (KePMS), hosted by USG PEPFAR

With respect to HIV/AIDS, clear tensions exist between information needs and requirements and national system capacities. As a result of suboptimal routine reporting rates and data quality, the National AIDS/STD Control Program (NASCOP)has begun to direct District AIDS and STI Coordinators (DASCOs) and DHRIOs to collect the reporting forms from facilities and deliver them directly to NASCOP, bypassing the FTP system altogether. Similarly, to populate the NACC's Community-based Program Activity Reporting (COBPAR) system, data reported to Constituency AIDS Coordinating Committees (CACCs) are aggregated and submitted directly to NACC quarterly, for entry into the COBPAR database by NACC personnel. While monitoring and evaluation staff within both NASCOP and NACC recognize the importance of strengthening and supporting the national HIS, they cannot rely on the FTP system to meet their information and reporting needs.

Development partners supporting HIV/AIDS programming share responsibility for the current fragmentation of the national HIS. For example, given that the first phase of the USG's PEPFAR was implemented to respond to an "emergency," the KePMS was designed with a short-term view of collecting and reporting USG implementing partner activity information, rather than a long-term view of strengthening Kenya's national HIS. While more recent PEPFAR support aims to promote coordinated system strengthening, such as the development and use of harmonized data collection and reporting forms, the KePMS continues to function as a parallel reporting system. PEPFAR-supported facilities are *required* to report to the KePMS and *encouraged* to report to the national FTP system.

Regarding the COBPAR system, while its development was supported by PEPFAR (with technical assistance from a USAID cooperating agency), the NACC indicates that very few community-based programs supported by the USG are reporting regularly to the COBPAR. Development of the COBPAR started several years after the inception of PEPFAR support in Kenya, and USG-supported community programs are still transitioning from reporting directly to their respective USG regional program to submitting data through the COBPAR. USAID estimates that the COBPAR reporting rate for USAID-supported community programs is currently 60 percent.

In addition to parallel reporting systems, NASCOP and NACC identify limited HIV/AIDS data sharing and limited transparency as barriers to optimal information system functioning. Both NASCOP and the Kenya Medical Research Institute (KEMRI) employ District level data clerks, through PEPFAR-funded agreements with the CDC. While NASCOP and NACC recognize the important role of these data clerks in filling a portion of the HIS human resource gap and in providing support to existing HIS staff, there is concern that data are being reported to and used internally by PEPFAR-implementing agencies, without adequate procedures to ensure transparency and widespread availability. In addition, it is only

within the last few months that the USG has made available to the GOK the non-HIV/AIDS data housed within the KePMS that has been collected over the past year through the harmonized, integrated data reporting forms.

In an effort to provide greater strategic leadership and oversight of coordinated, streamlined, and transparent HIS strengthening activities, the Division of HIS is engaging development partners in discussions related to a two-year HIS investment plan. The investment plan is based on priorities outlined in the five-year HIS strategic plan, but it details shorter-term HIS strengthening priorities, linking GOK and development partner investments to discrete outcomes. The investment plan also serves to increase transparency among HIS stakeholder groups.

Broadly, the strategic objectives of the two-year HIS investment plan are:

1. Create and maintain a Master Facilities List
2. Create an Integrated Health Databank
3. Implement a Kenya Electronic Health Information System (KeHIS) / District Support System
4. Improve data quality
5. Strengthen governance and oversight of HIS

7.3 INFORMATION PRODUCTS & DISSEMINATION

Prior to 2008, the Division of HIS published health sector statistic reports about once every three years. An annual report for 2008 was published in July 2009, and a 2009 report is in production and expected to be available later this calendar year. The annual reports comprise data from various sources, including the FTP system, surveillance, population- and facility-based surveys, vital registration, research institutions, the KNBS, and national programs within the MOH. The 2008 report cites a national reporting rate of 77 percent for routine data and 79 percent for morbidity data. During dissemination of the 2008 report, each DHMT received 10 copies of the report to share with stakeholder groups in the District. For the 2009 report, the Division of HIS plans to provide a copy to every health facility in country. The Division of HIS would like to produce topic-specific brochures and quarterly reports, but has identified gaps in data availability and quality as barriers to the production of additional and more frequent information products. According to the Division of HIS, stakeholders are able to access sector reports and sector data via Ministries of Health websites or by submitting a letter of request to the Division.

In addition to products produced by the Ministries of Health, health information is produced and disseminated by national programs and by other sector partners and stakeholders. The National AIDS/STD Control Program (NASCOP) produces yearly ANC reports and is moving towards quarterly M&E reports, while the National AIDS Control Council (NACC) coordinates production of HIV/AIDS sector reports, such as the annual Joint HIV/AIDS Program Review (JAPR). The NASCOP website's "Knowledge Centre" and the NACC website's "Reports and Statistics" page facilitate access to and dissemination of HIV/AIDS information products, including: the Kenya National AIDS Strategic Plan; survey, surveillance, and trend reports; prevention, treatment, and care guidelines; and HIV/AIDS facts and FAQs. Similarly, the website of the Division of Malaria Control includes a "Resource Centre," with malaria FAQs and downloadable documents such as the National Malaria Strategy, the National Malaria M&E Plan, the Malaria Program Performance Review 2009, survey reports, and implementation guidelines. The Division of Malaria Control disseminates these and other products, such as a quarterly newsletter, during Provincial level review meetings. The Kenya National Bureau of Statistics (KNBS) produces a variety of information products such as reports for health and demographic surveys,

expenditure surveys, and censuses, and is currently updating its website to better organize and archive data and information products. The Christian Health Alliance of Kenya (CHAK) produces an annual report that is disseminated widely and is available on its website as a public document.

7.4 HEALTH INFORMATION SYSTEM SUMMARY

Within Kenya, demand for high quality health information – for health sector planning, management, monitoring, and evaluation – has increased steadily over recent decades. While system design and strengthening activities have contributed to positive progress, in general, the country's health information system (HIS) currently is not sufficiently responsive or effective. The HIS is constrained by inadequate governance structures and implementation of policy and framework documents; shortages of skilled professionals at all levels of the health system; and fragmented, vertical strengthening interventions. The Division of HIS within the Ministries of Health is working to increase coordination and transparency through stakeholder alignment around a two-year HIS investment plan focusing on five key priority areas. This will eliminate the need for program specific and parallel information system such as the one managed by HIV/AIDS and EPI program just to name a few.

Kenya's health information system (HIS) includes routine service data; census and vital statistics; surveys; surveillance; other population- and facility-based statistics and research; management statistics; and information and communication technologies (ICTs). However, across these components, integration and interoperability is limited. In addition, information feedback loops and use of information for management and decision-making is variable across health system levels and across management units. The country's File Transfer Protocol (FTP) system to transmit routine service data from lower levels to the central level lacks adequate features to facilitate analysis and use of information for decision making, and the quality of data within the system requires improvement. Information products are produced and disseminated by the Division of HIS and other stakeholders, but deficiencies in quality, timeliness, and widespread availability hamper use and relevance.

8. SERVICE DELIVERY

The World Health Organization defines service delivery as the way inputs are combined to allow the delivery of a series of interventions or health actions (WHO 2001). Many of these inputs (health financing, human resources, pharmaceuticals, and information systems) are also included as separate modules of this health system assessment, while others (access to physical facilities and clinical guidelines) will be unique to the service delivery section.

For this health system review, maternal mortality and community outreach were identified as key health systems issues for further review that are unique to the service delivery module. A chart of the root causes of prevailing health problems and challenges in Kenya is included in Annex D.

8.1 SERVICE DELIVERY OUTCOMES

Service delivery outcome data is well documented in Kenya through regular Demographic Health Surveys, Service Provision Assessments, Client Satisfaction Surveys, and Household Health Expenditure Surveys, as well as through the country's Health Management Information System (HMIS), which feeds into the health sector's Annual Operational Plans and reviews. The service delivery section will rely heavily on data collected through the Demographic Health Surveys (KDHS), Service Provision Assessments (SPA), and the Household Health Expenditure Survey, as the most accurate reflection of the system's key indicators.

The Ministries of Health recently compiled a comprehensive review of the health sector trends from 1994-2010, with projections for 2011-2030, for their Health Policy Framework Review. That report will be followed by a more detailed analysis of statistical trends for the revision of the Health Policy Framework. This module will look to move beyond the focus on indicators to begin the discussion of health system strengths, weaknesses, bottlenecks, and priority interventions to move the system forward.

The data trends derived from the recently released 2008/09 KDHS show that many of the health indicators in Kenya have improved in recent years, with a few exceptions: nutrition and maternal mortality indicators have both stagnated. Between the 2003 KDHS and the 2008/09 KDHS, use of contraception rose from 39 percent to 46 percent; vaccination coverage rose from 57 percent to 68 percent; infant mortality decreased from 77 per 1,000 live births to 52; and under-five mortality declined from 115 per 1,000 live births to 74. Two of the indicators which did not show signs of improvement are Maternal Mortality, at 488 per 100,000 live births (up from 414 in 2003); and malnutrition, with 35 percent of children under five stunted, up from 30 percent in 2003. (CBS 2003, KNBS 2010)

HIV/AIDS continues to be one of the most serious public health challenges in Kenya. The recent KDHS shows significant improvements in knowledge, attitudes, and practice surrounding HIV/AIDS transmission, particularly in urban areas where HIV prevalence is highest (KNBS 2010). HIV testing has increased significantly since the 2003; nevertheless, in 2007, two-thirds of Kenyans reported that they have never been tested (NASCOP 2009). The 2008/09 KDHS reported that the national prevalence rate for adults aged 15-49 was 6.3 percent(NASCOP 2009), which is down from 6.7 percent in 2003 (CBS 2003). This period also recorded increases in ART coverage, which actually contributed to prevalence due to a decline in HIV deaths. The KAIS 2009 indicated that, although there are wide regional variations in HIV prevalence, ART services appear to be equitably reaching the population in need, with

few differences across socio-economic characteristics. The large unmet need for ARVs in Kenya stems largely from low awareness of HIV status, rather than unavailability of ARVs. However the increasing demand and large financing gap for ARV are likely to compromise the availability of ARVs in the near future.

Table 24 details some key service delivery indicators at the national level, as compared to the sub-Saharan Africa region.

TABLE 24. COMPARISON OF KEY SERVICE DELIVERY INDICATORS IN KENYA AND THE REGION

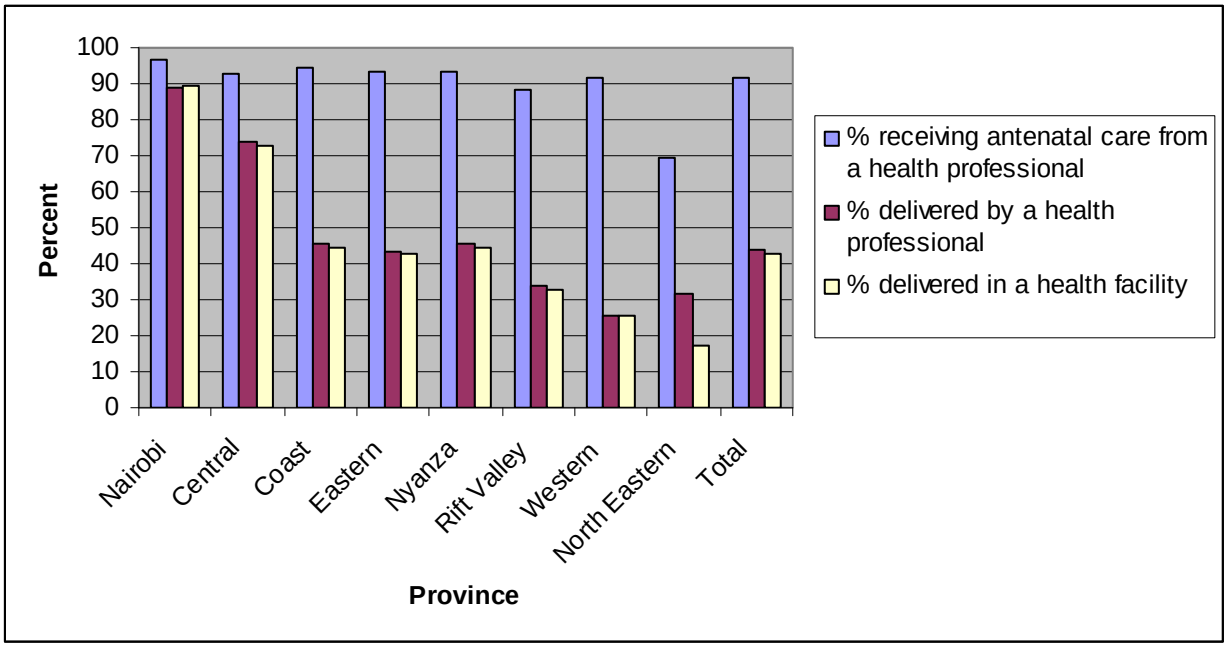
Health Systems data	Source of Data	Kenya	Year of Data	Average value for Sub-Saharan Africa	Year of Data
Service Delivery Module					
Number of hospital beds (per 10,000 population)	WHO	14.00	2006	14.81	2006
Percentage of births attended by skilled health personnel	WDI-2010	41.60	2003	51.25	2008
	KDHS	44	2008/09	**	--
DTP3 immunization coverage: one-year-olds (%)	KDHS	86.4	2008/09	**	--
	WHO	81.00	2007	85.22	2007
Contraceptive prevalence (% of women ages 15-49)	KDHS	46	2008/09	**	--
	WDI-2010	39.30	2003	19.78	2008
Pregnant women who received 1+ prenatal care visits (%)	UNICEF	88.00	2003	80.60	2003
	KDHS	90.6	2008/09	**	--
Unmet need for family planning	KDHS	26	2008/09	**	--
Children under five sleeping under insecticide-treated bed nets	WDI-2010	4.60	2003	29.27	2008
	KDHS	47	2008/09	**	--
Children under five with diarrhea receiving oral rehydration	KDHS	39	2008/09	**	--
	WDI-2010	33.30	2003	45.12	2007
ART coverage among people with advanced HIV infection (%)	WHO	27.00	2006	21.88	2006
Pregnant women tested for HIV during ANC visit	KDHS	56	2008/09	**	--

Source: Health Systems 20/20 Health Systems Database (http://healthsystems2020.healthsystemsdatabase.org/).

Disaggregated health statistics show wide variations in health outcomes across the country. Provincial-level break-downs demonstrate huge disparities between the more heavily populated and educated central provinces and the other provinces.

Figure 12 demonstrates the provincial level variations in maternal health indicators presented in the 2008/09 KDHS. The percent of births attended to by skilled health personnel per year varies widely across the country, with Rift valley, Western, and North Eastern Provinces faring poorly on the maternity indicators.

FIGURE 12. OVERVIEW OF MATERNAL CARE INDICATORS BY PROVINCE



Source: KNBS 2010.

The high maternal mortality rate, at 488 per 100,000 live births, was noted by the Ministries and the health partners as one of the key areas of concern in moving forward with the health system assessment, as it is one of the few health indicators which has not shown much progress in Kenya.

National level KDHS trends in both prenatal care (from 88 to 92 percent) and health facility deliveries (from 40 to 43 percent) show slight improvements between the 2003 and the 2008/09 KDHS. However, there are significantly lower rates of delivery in a health facilities in rural areas (35.4 percent) than urban areas (74.7 percent), along with significantly higher total fertility rates in rural areas (5.2) than urban areas (2.9) (KNBS 2010). Trends between 2003 and 2008/09 show that the slight improvements in health facility deliveries represented higher increases in urban areas (4.5 percent) than in rural areas (2.2 percent). These numbers reflect the challenges in providing care to rural and nomadic populations in more remote areas of Kenya, and the huge variation in access to and utilization of care across the country. However, they also reflect the lack of commitment to the service delivery priorities outlined in the strategic and operational plans, as the NHSSP II set as one of its top priorities increasing equitable access to health services (MOH 2005). This finding is consistent with the 2007 NHSSP II mid-term review, which found that that little progress had been made in the public sector to ensure redistribution of resources for pro-poor targeting.

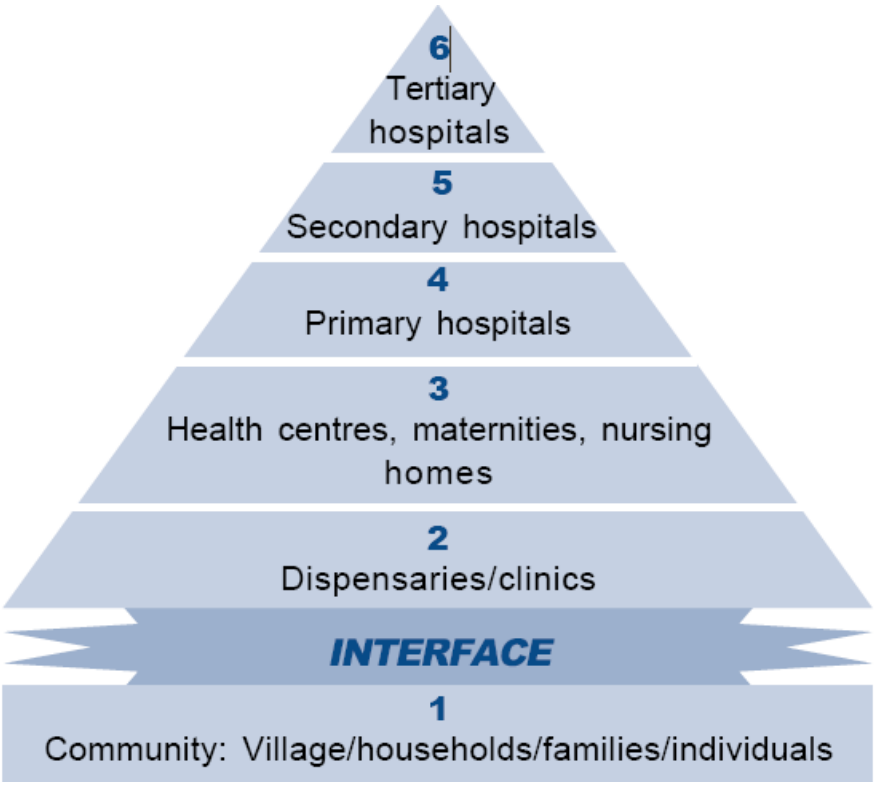
8.2 ORGANIZATION OF SERVICE DELIVERY

Key elements of the organization of service delivery to the HSA are integration of services and continuity of care. In Kenya, service delivery is structured around six levels, based on the function of the unit of service provision, in order to improve continuity of care throughout the system and throughout the life cycle. As discussed in the background information section, responsibilities for providing health services in Kenya are divided between two Ministries (see Table 6).

The Ministry of Public Health and Sanitation is responsible for primary health care via levels 1-3, while the Ministry of Medical Services is responsible for medical services and, generally, for levels 4-6 (MOPHS 2008, MOMS 2008c). Each level of service has specific service delivery and management roles, aligned to the function of the level. At levels 1–3 of the system, clinical staff also carry out management functions related to planning, monitoring, and supervision. Levels 4–6 include more extensive management functions, with overall coordination roles at the district, province, and central levels (MOH 2006c).

Figure 13 shows the relationship between the levels of care and the interface between the physical health structures (level 2) and the community (level 1). Table 25 outlines the functions of the 6 levels of care.

FIGURE 13. KEPH LEVELS OF CARE



Source: MOPHS Strategic Plan 2008-2012.

TABLE 25. SUMMARY OF THE LEVELS OF HEALTH SERVICE DELIVERY IN KENYA

Level	Population Served (Max)	Function
Level 1 – Community Health Unit	5,000	Community Health Units consisting of households, communities, and villages. This level of care was specified under NHSSP II and is in the process of being rolled out. Activities encourage healthy behaviors and assist community members to identify symptoms of conditions that need to be managed at other levels of care. (See section 9.6 on community participation in health for more information on level 1 roll-out.)
Level 2 – Dispensaries/ Clinics	10,000 (rural) - 15,000 (urban)	Interface between the community and health system facilities. This level is responsible for engaging the community and its structures through curative, promotive, preventive, and rehabilitative care at the most basic levels, as well as participating in the census, keeping health records, and micro-planning to contribute to the AOP and ensure that all communities are receiving care.
Level 3 – Health Centers, Maternities, Nursing Homes	30,000 – 40,000	Level 3 provides the services specified under level 2 for its immediate catchment population (10,000-15,000) and also provides additional services to support the level 2 facilities in its area, including: higher level health activities; recognizing and facilitating referral services; providing logistical support to level 2 facilities (e.g., cold chain support for KEPI); and coordinating information flow. Additional health activities added at this level include: additional outpatient care, largely limited to minor surgery on outpatient basis; limited emergency inpatient services (emergency inpatients, awaiting referral, 12-hour observation, etc.); limited oral health services; individual health education; maternal care for normal deliveries; specific laboratory tests (routine lab, including malaria; smear test for TB; HIV testing).
Level 4 – Primary Hospitals	100,000 (rural) – 200,000 (urban)	Level 4 is the principal referral level for all KEPH interventions from levels 1-3 and includes management functions supported by the DMOH and district partners. Its focus is appropriate curative care through primary hospitals. Hospitals at this level provide the level 2 and 3 functions for their surrounding areas but also provide: clinical supportive supervision to levels 2-3, higher level health activities, recognizing and facilitating referrals, providing logistical support, and coordinating information flow from facilities in the catchment. Additional health activities added at this level include: referral level outpatient care, inpatient services, emergency obstetric care, oral health services, surgery on inpatient basis, client health education, more specialized laboratory tests, and radiology services.
Level 5 – Secondary Hospitals	1,000,000	Consists of secondary hospitals and management functions supported by the PMOH and province partners. These facilities offer a broader spectrum of curative services and they serve as training facilities for nursing staff and clinical officers.
Level 6 – Tertiary Hospitals		Consists of national referral hospitals and management functions supported by MOMS. This level provides all the remaining specialized services at the national level, provides training for specialized cadres of health workers, and serves as a center for research.

Source: MOH 2006c.

Two major service delivery innovations outlined in the NHSSP II were the inclusion of an additional level of service delivery at the community level (discussed further in the community participation section, 9.6)

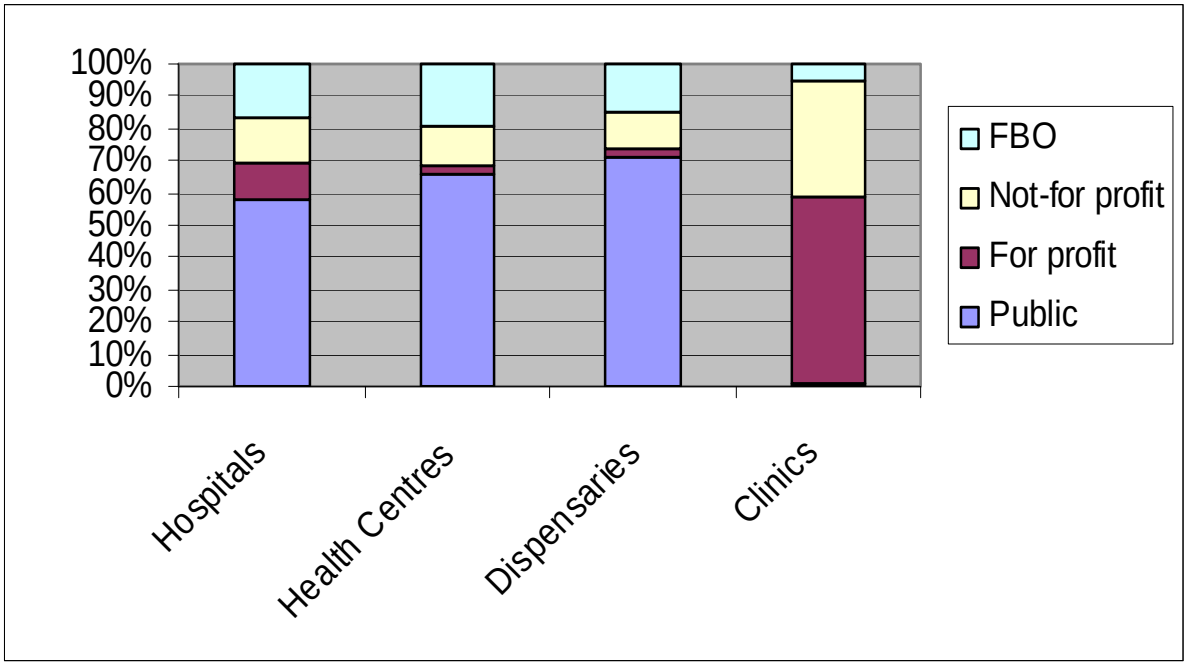
and the definition of the Kenya Essential Package for Health (KEPH), as the basis for the structure of primary health care services.

As of the 2007 mid-term review of the NHSSP II, the community strategy was being rolled out with varied success, limited by inadequate capacity and financial resources.

The intent of the KEPH is to integrate all of the health programs into a single package that focuses on improvement of health at different phases of the human development cycle (MOH 2005). All services included in the KEPH (primary health, malaria, TB, etc.) function through a single delivery point. However, several programs run vertical to the primary health programming (TB, malaria, HIV/AIDS other than PMTCT); these are planned for and implemented outside of the primary health structures. Funding modalities do not allow for integrating activities between the primary health care and vertical systems. Therefore, integration of primary health care and vertical programs happens at the discretion on the District Health Management structures, and it is up to the DMO to make these cross program linkages. Visits to public facilities found that all the integrated primary health care services are scheduled on a daily basis, rather than having certain days for certain KEPH services.

Table 9 (in the background section) shows the number of public and private health facilities at each level of care. The level 5 and 6 hospitals (14 total) are all owned by the public sector, while facilities at level 2-4 are both public and non-public. The ownership of level 4 hospitals, which includes district and sub-district hospitals, is roughly even: 56 percent public and 44 percent non-public. Facilities at levels 2, 3, and 4 (clinics, dispensaries, health centers, other hospitals, and primary hospitals) are also approximately half public and half non-public. The relationship between the public and non-public facilities varies by ownership and level of care. Figure 14 depicts the ownership of health facilities by facility type.

FIGURE 14. OWNERSHIP OF HEALTH FACILITIES BY TYPE OF FACILITY



Source: Master Facility List, February 2010.

According to the February 2010 Master Facility List, faith based organizations (FBOs) own 25% of the non-public facilities at levels 2, 3, and 4 (clinics, dispensaries, health centers, other hospitals, and primary hospitals). In 2009, a memorandum of understanding was signed between the government of Kenya and

the faith based health service providers (represented by the Christian Health Association of Kenya (CHAK), Kenya Episcopal Conference of the Catholic Church and Supreme Council of Kenya Muslims) in order to strengthen partnership and collaboration within the system. The MOU brings the participating FBOs into the public sector's joint annual planning and monitoring and evaluation processes. It also requires FBO health facilities to register with the medical board to ensure that they meet the basic legal and quality standards of their association's secretariat. These facilities also receive varying levels of support under the MOU and are required to account financially and submit regular reports to their secretariats, who in turn share this information with the GOK.

Not–for-profit, NGO, and/or facilities with unknown status account for 19 percent of the level 2, 3, and 4 facilities as well as 37 percent of non-public facilities overall (MFL 2010).[20] Together with the FBOs, these facilities have provided access to care for some of the most underprivileged members of society, working against the inequity in service provision.

There are also a large number of for-profit medical clinics functioning in Kenya which are not bound by the structured levels of the KEPH. If medical clinics are included in the totals for levels 2, 3, and 4, private for-profit facilities account for roughly 38 percent of the private sector facilities at these levels. The for-profit facilities are concentrated largely in Nairobi, Kisumu, and Mombasa; they vary from high-end, successful hospitals and clinics to (a larger number of) small-scale primary care providers that serve lower to middle income clientele. These small-scale providers struggle to remain financially viable and vary in quality. Due to the lack of a comprehensive spectrum of private facilities in most areas, private sector clients often need to be referred up to public facilities for higher levels of care (Barnes 2009). Although the private sector views itself as filling a gap in the public services, planning and coordination between the two sectors is minimal, and data from the for-profit facilities is, for the most part, not included in AOPs, nor is it available for planning purposes.

In theory, referral mechanisms do exist in Kenya between different levels of health care, although implementation varies widely across the country. According to the 2004 SPA, most district hospitals and nearly three-quarters of the public health centers with referral services had the capacity to communicate (via telephone or two-way radio) to arrange transport for emergencies (Ndavi et al 2009). The situation was much better for NGO/mission-run facilities. However, referrals become very difficult in more remote areas of the country. In discussions with health management teams in Northeastern Province, it became clear that urban referrals were not a problem, with adequate communication network and roads. The more distant facilities, however, had major difficulties referring patients. Some districts are not connected to the cellular network, do not have access to vehicles appropriate for the rough terrain, and/or are cut off from other facilities for periods of time due to inaccessible roads. Site visits to Rift Valley found no evidence of a referral system and respondents noted that verbal referrals were happening but that there was no feedback or follow-up on patients to see if they were actually receiving the care needed. These findings are consistent with the 2004 SPA findings that forms used for referrals were only available in 16 percent of facilities across the country—with almost half of facilities in Nairobi province having referral forms, compared to only 1 percent of facilities in Northeastern.

Key informant interviews at the central level indicate that a referral strategy has been prepared but the action plan has not been drafted so it has not been implemented.

[20] These numbers do not include faith-based facilities.

8.3 AVAILABILITY OF SERVICE DELIVERY

Availability of service delivery measures the degree to which health facilities that are functional, adequately equipped, and supplied are available to the population. As discussed in the finance and human resource sections, distribution of human and financial resources across the country is disproportionally skewed towards urban areas. Kenya faces serious challenges in filling and retaining qualified staff in remote areas, resulting in closure of many facilities, reliance on community health workers to run facilities[21], and a severe shortage in the number of staff qualified to provide emergency obstetric care in remote areas. (Information detailed in the pharmaceutical module also contributes to this sub-section, as stock-outs affect the availability of adequate services.)

The Ministries do have a set of Norms and Standards from 2006 which note that there will be variation in terms of staffing, equipment and resource needs across the facilities. The norms and standards also indicate standard catchment populations for various levels of service (noted in Table 25 of the summary of levels of care). According to these standards the system should include a total of 6,400 level 1 service delivery units, 3,200 level 2 service delivery units, 1,067 level 3 service delivery units, 320 level 4 service delivery units, and 32 level 5 service delivery units. When the standards were created there was a sufficient number of facilities in the country. However, similar to the distribution of human resources in Kenya, facilities are disproportionately skewed towards the urban and central districts and provinces, so that the national level totals masks severe facility gaps in the rural and outlying areas. Also, there is an over-availability of care at levels 2 and 4 (see Table 26 for a comparison of norms and actual facilities in the health system). Annex E documents the differences in existing and needed public facilities in Kenya by province. However, since Ministries' planning is not coordinated with the private sector, these numbers do not include non-public facilities (MOH 2006c).

TABLE 26. COMPARISON OF THE 2006 NORMS AND STANDARDS VS. THE ACTUAL NUMBER OF FACILITIES, NATIONALLY

Level of Service	2006 Norms and Standards	Actual Number of Facilities/CHUs in 2010[22]	Difference (standards-actual)
1	6400	1000	5400
2	3200	3356	-156
3	1067	721	346
4	320	439	-119
5	32	10	22
6		4	

Source: MOH 2006c; MOMS & MOPHS 2010e.

The AOP 4 review reports a 72.7 percent bed occupancy rate for Kenya between 2008-2009, with huge variations by province. Nairobi is the only province with a bed occupancy rate of over 100 percent; Northeastern has the lowest bed occupancy rate (32.8 percent)—which indicates either low utilization or excess capacity, despite the deficit in facilities as compared to the norms and standards. Thus, not only are facilities less available in remote areas, but they may be under-utilized as well—which reflects lower demand for services in an atmosphere of deteriorating facilities, limited numbers of qualified staff, regular stock-outs, and/or poor transportation infrastructure.

Successful initiatives of UNICEF, DANIDA, the USG, and other health partners in remote areas have helped in providing immediate access to health services through nomadic clinics, floating doctors,

[21] Key informant interviews in Northeastern province.
[22] Includes public and private facilities; does not include medical clinics.

recruitment of contracted staff, outreach services, incentives for birthing in health facilities, and other creative approaches. However, the majority of these initiatives are still funded and organized by health partners and have not been undertaken by the GOK in a sustainable way. As one respondent in Northeastern summarized, they are "hit and run" activities which will continue to be sporadic and unsustainable without adequate resources, especially to hire and retain staff in remote areas, and without true policy and planning input from the remote areas. Strengthening in these areas would contribute to strengthening the health system as a whole.

8.4 SERVICE DELIVERY ACCESS, COVERAGE, AND UTILIZATION

Service delivery access refers to the ability of a population to reach appropriate health services, taking account of geographical and transportation barriers, lack of financial resources, and cultural appropriateness. Coverage refers to the proportion of people in need of services that are actually receiving them, while utilization refers to the frequency of using the health system.

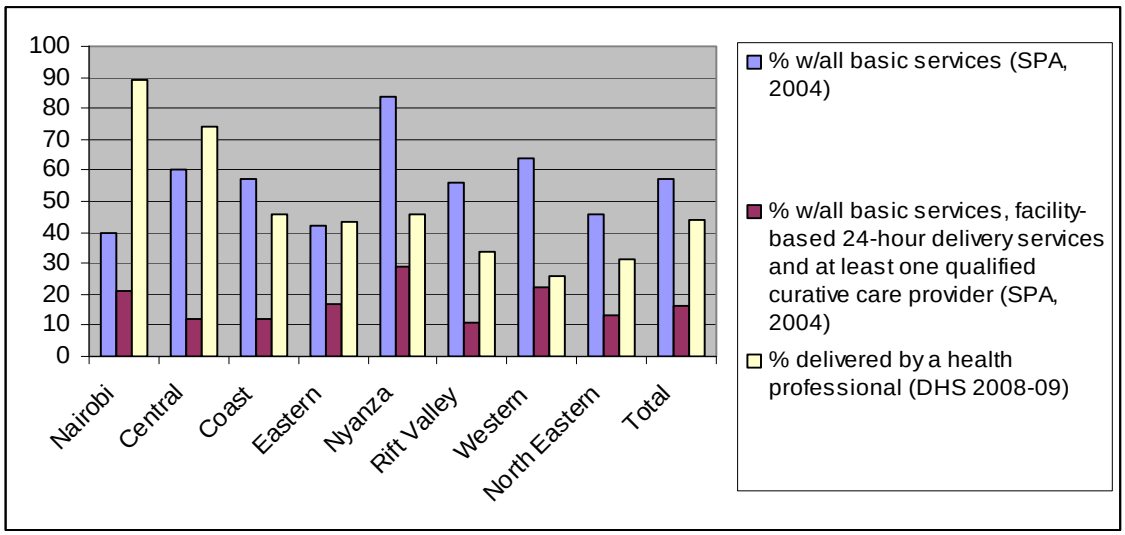
Complications related to pregnancy and childbirth are among the leading causes of morbidity and mortality among Kenyan women. Hospital-based studies suggest that the majority of these deaths are due to obstetric complications, including hemorrhage, sepsis, eclampsia, obstructed labor, and unsafe abortion (NCAPD 2005). Less than 50 percent of women are delivering in health facilities (KNBS 2010); only 27 percent of facilities have support for emergency transport support for maternity services (NCAPD 2005); and of the facilities offering delivery services, only 20 percent are able to perform cesarean sections and/or blood transfusions.

AOP5 identifies ensuring universal access to maternal, child, and neonatal health services as one of the service delivery priorities, and it sets a goal of a 15 percent increase in deliveries conducted by skilled health attendants in health facilities. To do this, the work plan lays out a plan for demand creation and supply side interventions such as free delivery, skilled attendants, effective referral, and other emergency obstetric care components. However, although the technical planning units regularly identify system constraints, follow-through in implementation remains a major challenge.

8.4.1 SERVICE AVAILABILITY AND UTILIZATION

Kenya is currently undertaking a service provision assessment, and data will be available in the near future to determine whether the advances made under NHSSP II have made a difference in terms of the availability of basic services and staff to meet the population's needs. Figure 15 shows the availability by province of basic services and of basic services with facility-based 24-hour delivery services and at least one curative care provider, as well as the percentage of maternity cases delivering with a health provider.

FIGURE 15. AVAILABILITY OF BASIC SERVICES

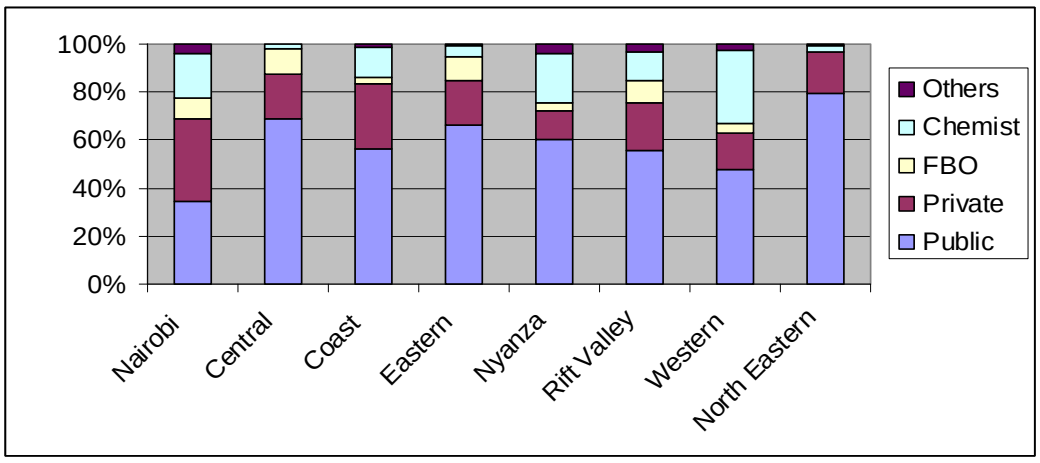


Source: SPA 2004.

The full package—maternal, child, STI, and reproductive health services, available at the defined minimum frequency with 24-hour facility-based delivery services—was available at only 16 percent of all facilities. This includes 50 percent of hospitals, 42 percent of maternities, and 34 percent of health centers (NCAPD 2005). It is interesting to note that the availability of 24-hour delivery services does not correlate with higher delivery by health professionals. This means that factors other than availability, such as education levels, transportation, cost and other factors, may be significant.

Service utilization is not clearly skewed toward either public or private facilities. This may reflect a lack of client options for health care providers and/or variations in quality among non-public providers. Figure 16 depicts the distribution of outpatient visits by type of health provider and province.

FIGURE 16. DISTRIBUTION OF OUTPATIENT VISITS BY TYPE OF HEALTH PROVIDER AND PROVINCE



Source: GOK 2009a.

8.4.2 SERVICE DELIVERY OUTCOMES

DPT3 immunization coverage has improved from the 2003 KDHS, from 72 percent to 86.4 percent. Regional variations in immunization mirror other health trends already discussed.

Contraceptive prevalence jumped from 28.4 percent (2003) to 46 percent (2008/09). Even so, the unmet need for contraception rose from 24.5 percent (2003) to 26 percent (2008/09), showing increased demand for family planning. Fertility rates have remained fairly consistent since the 1997 KDHS, moving from 4.7-4.9 (2003) to 4.6 (2008/09). Interestingly, the KDHS 2008/09 reports a decline in the contribution of the private sector for family planning supplies, from 41 percent (2003) to 36 percent (2008/09); the largest dip occurred in supply from private hospitals, moving from 24 percent (2003) to 19 percent (2008/09).

The 2009 client satisfaction survey documents that 80 percent of Kenyan households can access a health facility within 3 km of their home. The survey also reports that over the past year, 47 percent of the general public felt that healthcare in their region had improved, and only 11 percent said that it got worse. The main reason for this was improved access to facilities (62 percent), followed by improved access to medicines (22 percent) (MOMS & MOPHS 2009b). Also, patients who used FBO facilities reported higher levels of satisfaction (80.8 percent) than patients using government facilities (73.8 percent). Of the government facilities, patients reported higher levels of satisfaction with level 2 and 3 facilities than with level 4, 5 and 6 facilities(MOMS & MOPHS 2009b). This improvement in access to facilities could relate to the additional facilities being built without Ministry planning, through constituency development funds for communities. These facilities may, in some cases, fill a true need for a facility, but they are largely being targeted and built without Ministry consultation on underserved areas, and they nevertheless become a part of the public system once they are built.

User fees are discussed in detail in the finance section. A policy for user fee exemptions exists. Key informants noted that in government owned facilities, exemption decisions are generally based on patient history as well as community knowledge. It was noted that, in the facilities visited, no patients are turned away at government facilities because of inability to pay.

8.5 QUALITY ASSURANCE OF CARE

To assure the clinical quality of health services, health systems must define, communicate, and monitor the level of quality of care. This information is used by policy makers and providers to improve quality. Quality is also impacted by the motivation of providers to implement standards of care.

According to the MOPHS 2008-2012 Strategic Plan, service delivery faces many quality constraints: the low caliber of human resources, deteriorating facilities and equipment, lack of drugs, insufficient information on which to base both policy and targeted responses, insufficient standards, and lack of enforcement of existing laws (MOPHS 2008).

Within the Ministry of Public Health and Sanitation, the Standards and Quality Assurance Division within the Primary Health Department was created to coordinate M&E and to formulate standards. Within the Ministry of Medical Services, there are regulatory bodies within the Standards and Regulatory Services Department to oversee regulation, quality assurance, and standards for public and non-public facilities. These regulatory bodies include the pharmacy and poisons board, the clinical council, the nursing council, Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB), and the Medical Practitioners and Dentists Board. Together, these groups regulate the HR cadres through accreditation and staff development and follow up on patient complaints.

System quality checks through the service delivery management structures include a number of tools: medical record audits; supervisory checklists with client care issues; a supervisory checklist observing consultations; and holding meetings to discuss client care problems or trends in client utilization data from the HMIS. Other quality assurance mechanisms include facility management committees, client and employee satisfaction surveys, monitoring by Ministry and Treasury supervisors (MOPHS 2008), the ongoing Hospital Reform process, and NHIF accreditation.

According to the 2004 SPA, 30 percent of facilities conducted quality assurance activities, with documentation of the quality assurance process; 59 percent reported supportive management practices to individual health workers, including supervision. The 2010 AOP4 review (six years after the SPA data) paints a much improved picture of supportive supervision, as did the site visits conducted by the Health Systems 20/20 team. The AOP4 review reports all districts providing at least two supportive supervision visits per year per facility, with most reporting quarterly supervision visits. Facility site visits to Northeastern and Coast showed quarterly and sometimes monthly supervision visits by PHMT, DHMT (and/or vertical programs with a standard data collection tool); Rift Valley showed at least two to four visits a year per facility, with the more accessible facilities seeming to have more supervisory contacts. Enhanced supervision in the Northeastern and Coast province may be due to increased health partner support for supervision (through DANIDA). Lack of funds and transport were the most-cited reason in the 2004 SPA for failure of DHMTs to meet their supervision targets, despite nearly universal documented supervision plans (Ndavi et al 2009). However, as reported in the finance section, stoppage of remittance of 25 percent of user fees to PHMT/DHMT is compromising supervisory activities, and the AOP 5 review may paint a less promising picture than the AOP 4 review.

The standard tool used for quarterly supervision by the Provincial and District offices in Kenya includes aspects of the vertical programs (TB, malaria, and HIV). Vertical programs also have coordinators at the provincial and district levels who reportedly conduct additional supervision visits as well.

There is a quality assurance gap when it comes to accreditation of facilities. According to key informant interviews at the central level, the NHIF accreditation process takes place every two years and has accredited 583 health facilities in the public, private and faith-based sectors for rebates within the NHIF system. The accreditation process includes a scoring of the physical resources available at the clinics but does not review the human resources or care provided.

The ongoing Hospital Reform process and NHIF accreditation are only including a subset of health facilities in their accreditation processes. Level 2 and 3 facilities are excluded from the process. Quality assurance efforts at these levels are mostly focused on supportive supervision and registration of human resources, rather than ensuring that the facilities are up to par.

Updated clinical standards for MoHs priority areas (such as malaria, PMTCT, and TB) are distributed to public health facilities through vertical programs and were found in all of the facilities visited. A general set of updated clinical standards, however, is not currently available; the set of three standards (for level 2, level 3, and levels 4-6) were printed in early 2010 and are awaiting distribution to facilities. Several key informants at the national level noted printing and distribution of materials as posing a challenge. Key documents such as the AOPs and some clinical standards are not available in sufficient quantities for distribution to all facilities. It should be noted that presence of clinical standards does not mean the standards are being used. The 2008 Assessment of Workforce Competency and Facility Readiness to Provide Quality Maternal Health Services assessed 19 Kenyan health facilities in 3 provinces and found that the maternal health standards were only available in 5 of the facilities assessed and were only being used in 2 of the facilities (Mutungi et al. 2008).

Client and employee satisfaction surveys are conducted regularly as a system feedback mechanism, and are used in the AOP process for review and in setting institutional annual performance contracts.

Strengthening the planning process to better respond to the results will be key to meeting client needs. Another way to improve action on client surveys would be to provide incentives to providers to improve. Some non-financial incentives are already being used in the level 3-6 facilities in the hospital reform process. The process issues rankings and certificates of recognition to hospitals that are performing well. Extending these types of performance recognition to level 2-3 could motivate health workers to improve on services provided. The 2004 SPA showed that provider motivation is higher at private facilities according to two indicators: the proportion of public vs. private providers who indicated that incentives would help to improve quality (50.2 percent compared to 25.6 percent); and the proportion of public vs. private providers who indicated that reducing workload would help improve quality (53.0 percent compared to 29.0 percent)(Agha 2009). These performance-based incentives, however, would require the capacity to collect the necessary data for performance review. (See the HIS section for more information on the challenges in the health information system.)

In discussions with the Ministries of Health, the concept of a proposed "county" system arose several times. This county system would break the country up into a discrete number of counties (between 35 and 70) for health governance. This initiative would help to mitigate the challenges of "new" districts/constituencies at the central level. It has also been cited as a way to better manage and recruit individuals for specific regions and career paths, and specifically to recruit managers for managerial positions, rather than assigning doctors to manage hospitals and/or districts.

8.6 COMMUNITY PARTICIPATION IN SERVICE DELIVERY

The level 1 strategy introduced in the NHSSP II is being implemented in phases through 2014. Community Health Unit pilots have shown promise in improving health outcomes. However, implementation has been slow, and funding has not been secured to finalize the process.

The community strategy, as laid out by the Division of Community Services in the Ministry of Public Health and Sanitation, is to target the 52 percent of the Kenyan population that is living below the poverty line through community health units. Each community health unit of 5000 people would be served by 50 Community health workers (CHW) carrying out preventive/promotive health services to roughly 20 households each, supervised by two Community Health Extension Workers (CHEWs)—one PHT and one nurse. The unit would be overseen by a community health committee. The CHWs and CHEWs would collect information through the Community Health Information System, to feed into the National HMIS.

The community strategy targets roughly half of the total population (40,345,000, according to the 1999 census projection) as the basis for planning, aiming to cover the 52 percent living below the poverty level, i.e., with income of less than $1 per day. Table 27 presents a summary, supplied by the Ministry, of the number of targeted community units to be established by 2014, along with the community units already established, districts where the community health strategy has been rolled out, and the partners involved. So far, roll-out has been slow due to training implementation and funding delays.

TABLE 27. SUMMARY OF COMMUNITY HEALTH UNIT IMPLEMENTATION

Province	Target # of CHUs	# of CHUs established	Implementation rate (%)	Districts	Partners
Nairobi	349	12	3.4%	Kasarani, Nairobi West, Starehe	AMREF, KIDDP
Central	503	188	37.4%	Nyandarua, Nyeri, Kiambu, Kirinyaga, Thika, Muranga South	APHIA II, KIDDP, MOPHS
Coast	365	120	32.8%	Kilifi, Mombasa, Kilindini, Taita	Aga Khan, GAVI HSS, APHIA II and JICA
Eastern	651	123	19%	Yatta, Machakos, Makweni, Mwala, Kangundo, Kibwezi, Mbooni, Nzaui, Kitui	GAVI HSS , APHIA II, Plan international,
Northeastern	150	12	8%	Wajir (West, Central, South and North)	GAVI HSS
Nyanza	608	128	21%	Kisumu (West and East), Bondo, Siaya, Suba, Rachuonyo	GAVI HSS, APHIA II, EHS, Plan International, Mild May, GLUK, AMREF
Rift valley	1,073	200	18.4%	Kajiado, Loitokitok, Narok, Eldoret, West Pokot, Nakuru, Bomet	AMFRE, GAVI HSS, APHIA II,
Western	499	217	43.5%	Kakamega (West, East, and Central), Mumias, Bungoma (West, East, Central and South), Busia	APHIA II, AMREF, GAVI HSS
Total	4,198	1,000	23.8%	83 districts out of 269 = 31%	

Source: Data provided by the MOPHS, Division of Community Health Services in May 2010.

Two key points are important to note. (1) The distribution of community units does not take into account the uneven poverty distribution in the country—it assumes a 52 percent rate across all provinces. (2) As noted in the partners column, the majority of this initiative is not being funded by the GOK; however, its sustainability would depend on Ministry support. Another point to note is that the community units have been experiencing retention challenges, with uncompensated CHWs.

In the absence of established "community health units," communities participate with facilities in the management and delivery of health services through a health facility board/committee, as discussed in the governance section. According to the 2004 SPA, 70 percent of facilities report having routine management committees that meet at least every six months. This is similar to the SPA 1999 findings, where 66 percent of facilities reported regular management committee meetings (NCAPD 2005). However, only 49 percent of government-managed facilities report community involvement in management meetings, despite the fact that government requires every facility to have a management committee or board for community ownership (NCAPD 2005). Forty-four percent of facilities report having regular community participation in some facility management meetings.

The bottom-up planning of the AOP is another means for inclusion of voices from the lowest levels, up to the district, provincial, and central levels.

8.7 SERVICE DELIVERY SUMMARY

Service provision in Kenya is critically constrained by human resources, finances, and medical product supplies. Generally, there are great inequalities in the availability and utilization of services in Kenya due to these constraints, as evident from the 2009 Kenya Demographic Health Survey. These inequalities have negatively impacted many of the country's main health indicators, particularly maternal health. In rural areas, obstetric care, referral, and outreach services are not adequate to prevent women from delivering at home, nor are there adequate numbers of skilled birth attendants available for at-home deliveries.

The addition of the community level and the definition of the essential health package (KEHP) are two innovations to improve service delivery in Kenya. However, implementation of the community strategy has been slow, and human resources are inadequate in many areas to implement the KEHP. Since HIV/AIDS services are integrated and form part of the KEPH, they will benefit form the reforms intended to improve on service delivery.

Service provision quality care is constrained by inadequate standards and lack of enforcement of existing laws. However, strides are being made to improve this situation through the distribution of a newly printed set of clinical guidelines for facilities, improvements in clinical supervision, and new policies for accreditation for private facilities and hospital reforms. Quality will continue to be hampered by the lack of accreditation for public facilities, as well as by inequalities in resource distribution (discussed above), inability to collect accurate performance data through the Health Management Information System (HMIS), and unreliable supply of medical products.

The anticipated reforms in the health sector especially the one divorcing the Ministries of health from service delivery to policy and regulation will further enhance quality of services delivery in the health sector.

9. SYSTEM PERFORMANCE CRITERIA

This section discusses the performance of the Kenya health system with respect to equity, efficiency, access, quality and sustainability. These performance criteria, while broad in scope and not equally applicable to all the components of a health system, provide information on the major health system issues and can inform benchmarking of health system strengthening activities.

9.1 EQUITY

Human, financial, and physical resources are inequitably distributed across the country, with huge disparities between central, more urbanized areas and more remote, rural areas. In terms of voice, the views of the lower level facilities (district hospitals, health centers, and dispensaries) are sometimes solicited but are rarely considered as priorities, as evidenced by lack of feedback mechanisms.

9.2 EFFICIENCY

The split into two ministries resulted in duplication, fragmentation, and a general lack of efficiency throughout the sector. In turn, service delivery was interrupted and the implementation of the operational plan was severely slowed down. The presence of several fragmented information systems within the sector leads to further duplication of effort, and lack of a single, reliable source of data on which to base decisions.

Efficiency of service delivery would be improved by three broad reforms: greater inclusion of the private sector and development partners in health services planning; more equitable distribution of human and financial resources; and increased integration of vertical program monitoring and coordination mechanisms.

The acute maldistribution of HRH results in pronounced inefficiencies in the use of HRH budgets. Using the same budgets, a far higher degree of service delivery equity could be achieved, if staff were distributed according to need.

9.3 ACCESS

There are large disparities in access to health services. There is an over-availability of facilities at levels 2 and 4, along with poor distribution of facilities, so that some areas are over-served while some facilities have catchment areas of over 50 km^2. Access to services in rural areas is severely limited by lack of human resources at health centers and dispensaries: even where health center buildings exist, a severe lack of nurses (20% fill rates) limits actual access.

9.4 QUALITY

Many quality assurance mechanisms are in place in the health system, but they rely heavily on the quality of the human resources, rather than on quality assurance *systems*. Supervision takes place frequently in some locations and not at all in others. Having frequent and reliable service delivery data available in the HMIS would also strengthen quality. Incomplete HMIS reporting from the districts renders the available aggregate data unreliable.

According to the MOPHS 2008-2012 Strategic Plan, service delivery faces many quality constraints: the low caliber of human resources, deteriorating facilities and equipment, lack of drugs, insufficient information on which to base both policy and targeted responses, insufficient standards, and lack of enforcement of existing laws.

9.5 SUSTAINABILITY

Development partners still fund a large portion of the health sector. However, development partner contributions to the health sector are largely project-based and run outside the public health provision structures. The community level strategy, for example, is almost entirely donor funded. This initiative will not be sustained after rollout without a financial commitment from the GOK to maintain these networks.

10. RECOMMENDATIONS

Based on the findings presented for the individual building blocks, this section presents priority issues and specific opportunities and ideas for solving them.

10.1 GOVERNANCE RECOMMENDATIONS

In terms of governance, perhaps the most important recommendation is to re-merge the two ministries. This step may be accomplished by passage of the proposed new constitution.

Other recommendations include:

- Merge JICC with HSCC to avoid duplication of responsibilities, strengthen coordination, and speed up policy development and planning.
- Create or strengthen formal roles for interested CSOs, FBOs, and individuals to participate in sector policy process, including planning, monitoring and evaluation.
- Enhance the use of high-quality HMIS data for analysis and packaging to facilitate policy development. This will improve transparency and accountability.
- Speed up implementation of the recommendations of the report, "Proposal and Roadmap for the Reform of Health-Related Legislation in Kenya."

10.2 FINANCE RECOMMENDATIONS

- Revitalize the task force on health care financing to complete the health care financing strategy.
- Restructure NHIF to make it more responsive and efficient.
- Rationalize the use of financing mechanisms to ensure provision of adequate benefit packages.
- Fast-track the training of DHMTs and health facility committees to be able to budget and account for direct funding.
- Ensure designation of health facilities as accounting units in the Public Health Act review process.
- Improve absorption capacity for the procurement of pharmaceuticals and construction works through prior planning.
- Ensure only realizable Appropriations in Aid are reflected in the budget.
- Realign the AOP processes with Medium Term Expenditure Framework.
- Allow Districts and health facilities to undertake AOPs based on resource envelope, to get away from zero-based budgeting.
- As revenue collected at dispensary level is negligible, it may be advisable to scrap these fees once the HSSF is fully operational.

- Ministries of Health should be authorized to hire and retain economists/planners to drive major health financing reforms.

10.3 HRH RECOMMENDATIONS

The Kenya health workforce represents a unique case in sub-Saharan Africa. While data are incomplete, it could be argued that the absolute number of healthcare providers approaches or surpasses the WHO recommendation of 2.3/1000 population. Production and attraction are more than sufficient to meet the hiring plans of the health sector in Kenya. Indeed, a portion of medical graduates each year cannot find employment in the health sector.

HRH shortages in rural and remote areas are nevertheless acute, as elaborated in the module. Government efforts to address this situation should include the following intervention areas.

- **Harmonize staffing with need**. The current practice of budgeting for establishments based on last year's filled posts must be abandoned in favor of a needs-based HRH planning process, accounting for disease burden, population density, and geographic challenges to access.
- **Accountability in distribution**. Inequities in provider distribution must be addressed at the national and district levels, using existing legal and regulatory frameworks. Transparency in distribution, hiring, and placement will shed bright light to discourage cronyism and favoritism.
- **Budget-neutral incentive schemes** to improve rural retention. Incentive systems that have been tried thus far have been largely ineffective, owing to lack of funding. Yet budget-neutral interventions that have been successful in other countries have largely been ignored. However a proposal to attract health workers to the rural areas has been prepared by Ministries of Health and submitted to the Ministry of State for Public Service for consideration. Effective reform in this area will require policy change and political will, such as requiring rural service for a short, fixed length of service and redistributing staff to gain care equity.
- **Recognition for superior performance**. There exist limited systems of incentives for individuals performing up to standard or for exceptional performance. During a recent health summit, an award system was introduced to award the best performing regions and facilities. Budget-neutral systems such as community feedback mechanisms and data-based recognition systems should be implemented.

10.4 MEDICAL PRODUCTS MANAGEMENT RECOMMENDATIONS

- Develop a comprehensive Pharmaceutical Master Plan with well-defined objectives, inputs, outputs, targets, time frames, responsibilities, and budgets. AOPs should be aligned with the master plan.
- Develop a single pharmaceutical module as part of a harmonized HMIS. The data contained therein should be used exclusively for ordering, procurement, and distribution.
- Split the current Pharmacy and Poisons Act into two legal frameworks: one governing medicines; another governing the practice of pharmacists, as with other health professions.
- Streamline the drug registration process, and consider the introduction of registration fees. Make registration information part of the pharmaceuticals module of the greater HMIS.
- Do away with the current push system employed by KEMSA for distribution to the facilities. Strengthen capacity at all facility levels to plan and order medicines based on usage and projected need.

- Improve private sector pharmaceutical service coverage, especially for rural and under-served areas. Two strategies to consider are: an incentive system for setting up pharmacies in these areas; and a flexible accreditation system for informal drug sellers.

10.5 HIS RECOMMENDATIONS

- Move forward with creation of a multi-stakeholder National Health Information System Coordinating Committee (NHISCC) which represents all stakeholder groups.
- As has been done with the faith-based community, develop MOUs between the GOK/health ministries and other major private sector stakeholders regarding procedures, roles, and responsibilities around health information, monitoring, and evaluation.
- Provide incentives to private sector participants to encourage and expand health information related services.
- Should the current split MOH continue (if the proposed constitution fails to be ratified), initiate and maintain a human resources/skills management process to better meet staffing needs related to priority HIS components, initiatives, and stakeholders.
- Strengthen coordination between the Division of HIS, the Department of Civil Registration, and the KNBS to improve quality, integration, and use of vital statistics data.
- Aggressively pursue the development of a District level decision support system.

10.6 SERVICE DELIVERY RECOMMENDATIONS

- Community level strategy needs to be centrally funded to be sustained over time.
- Communities should be prioritized for inclusion in the level 1 strategy, in order to truly serve the most vulnerable populations. The current distribution of community units does not take into account the uneven poverty distribution in the country—it assumes a 52 percent rate across all provinces.
- Empower the system to take on AOP activities identified at the decentralized levels. This can be accomplished through a more transparent allocation of funds and better prioritization of activities. Decentralized planning will enable provinces/districts to purchase necessary items for referrals (transport and communication) and outreach services. It will also provide flexibility in addressing health needs which are unique to certain areas of the country. For example, outreach services/initiatives to reach remote populations could be more systematically incorporated through decentralization, mitigating the need to rely on development partners to provide these services.
- Implement a system of performance recognition for level 2 and 3 facilities.
- The referral strategy needs to be implemented.
- Private sector facilities and data need to be included in planning.

REFERENCES AND RESOURCE DOCUMENTS

Adano, Ummuro. 2008. *Health Worker Recruitment and Deployment Process in Kenya: an Emergency Hiring Program*. *Human Resources for Health* 6 (1): 19. USAID Capacity Project.

Agha, Sohail and Mai Do. 2009. Quality of Family Planning services and client satisfaction in the public and private sectors in Kenya. *International Journal for Quality in Health Care* 21(2): 87-96.

Barnes, Jeff, Barbara O'Hanlon, Frank Feeley, Kimberly McKeon, Nelson Gitonga, and Caytie Decker. 2009. *Kenya Private Health Sector Assessment.* Bethesda, MD: Abt Associates Inc.

Brinkerhoff, Derick W., and Thomas J. Bossert. 2008. *Health governance: Concepts, experience, and programming options*. Health Systems 20/20 Policy Brief. Washington, DC: U.S. Agency for International Development.

Capacity Project. 2009. *"What about the Health Workers?" Improving the Work Climate at Rural Facilities in Kenya.* IntraHealth: USAID Capacity Project. Available at: http://www.intrahealth.org/page/voices-from-the-capacity-project-what-about-the-health-workers

Central Bureau of Statistics (CBS) [Kenya], Ministry of Health (MOH) [Kenya], and ORC Macro. 2004. *Kenya Demographic and Health Survey 2003.* Calverton, Maryland: CBS, MOH, and ORC Macro.

Central Intelligence Agency (CIA). 2010. *World Fact Book*. Kenya. Available at https://www.cia.gov/library/publications/the-world-factbook/geos/ke.html.

Christian Outreach Centre-Kenya (COC). 2009. Partnership Review Report.

Chuchu, Sarah et al. 2006. *Assessment of Pharmaceutical Management Systems in Selected Public Health Facilities in Nairobi Province.* Ministry of Health. Republic of Kenya. (Unpublished report.)

DFID. 2008. *DFID Institutional Review Report, Dec, 2008.* Available at http://www.ambnairobi.um.dk/NR/rdonlyres/4D0FBB17-FD96-40A4-9BF1-4A9E1F6FC8EB/0/Institutionalreviewreport_final_24Dec08.doc.

Drechsler, Denis, and Johannes Jütting. 2005. Private Health Insurance for the Poor in Developing Countries, *Policy Insight* No. 11. OECD. Available at http://www.oecd.org/dataoecd/25/14/35274754.pdf.

Euro Health Group (EHG). 2009a. *Proposal and Roadmap for the Reform of Health- Related Legislation in Kenya- Final Report.*

----------. 2009b. *Technical Assistance for Strengthening the Pharmaceutical Sector in Kenya.*

----------. 2010. *Evaluation of the Pull System for Essential Medicines and Medical Supplies in Kenya.*

Federation Internationale Pharmaceutique (FIP). 2009. *2009 FIP Global Pharmacy Workforce Report.* (www.fip.org/hr)

Government of Kenya. 2005. *Kenya National Health Accounts 2001/02*. Nairobi.

----------. 2007a. *Community Strategy Implementation Guidelines for Managers of the Kenya Essential Package for Health at the Community Level.*

----------. 2007b. *Health Sector Working Group Report: Medium Term Expenditure Framework 2007/08-2009/2010.* Nairobi: Ministry of Health.

----------. 2007c. *Kenya Vision 2030: A Globally Competitive and Prosperous Kenya.* Nairobi.

----------. 2007d. *Linking Communities with the Health System: The Kenya Essential Package for Health at Level 1: A Manual for Training Community Health Extension Workers.*

----------. 2009a. *Kenya Household Health Expenditure and Utilization Survey 2007.*

----------. 2009b. *Kenya National Health Accounts 2005/2006.* Bethesda, MD: Health Systems 20/20 project, Abt Associates Inc.

----------. 2009c. *Proposal and Road Map for the Reform of Health Related Legislations in Kenya.* Nairobi: Ministry of Medical Services and Public Health and Sanitation

----------. 2009d. *Public Expenditure Review 2008/09*. Nairobi.

----------. 2010. *Kenya Economic Survey, 2010*. Central Bureau of Statistics: Nairobi.

Government of Kenya and Health Systems 20/20 (GOK & Health Systems 20/20). 2010. Report of the Technical Working Group on Sustainability for the Kenya HIV/AIDS Program. Nairobi. (forthcoming)

Health Metrics Network. 2009. *Guidance for the Health Information System Strategic Planning Process: Steps, Tools and Templates for HIS Systems Design and Strategic Planning.* Geneva.

Health Research for Action (HERA). 2005a. *Consultancy on Access and Institutional Capacity Assessment in Kenya. Kenya Pharmaceutical Review-Study B1* (Access), Final Report, June 2005.

----------. 2005b. *Consultancy on Evaluating/Improving Quality Assurance and Sustainability in the Medical Supplies Sub sector in Kenya* (Study C). Kenya Pharmaceutical Review- Study C (Quality Assurance)-Final Report, Vol. 1- June 2005

Health Systems 20/20. 2010a. *Quality Analysis: FTP Data on HIV/AIDS Programs, 2009*. Bethesda, MD: USAID Health Systems 20/20.

----------. 2010b. *Improving the productivity of healthcare workers at district hospitals in Zambia.* Bethesda, MD: USAID Health Systems 20/20. (report in process).

Ikamari L, Adewuyi AA, Akinlo A. 2007. *Decision Maker Perceptions in Kenya and Nigeria: An Assessment of Data Use Constraints.* Chapel Hill, NC: MEASURE Evaluation.

Islam, Mursaleena, ed. 2007. *Health Systems Assessment Approach: A How-To Manual.* Submitted to the U.S. Agency for International Development in collaboration with Health Systems 20/20, Partners for Health Reform*plus*, Quality Assurance Project, and Rational Pharmaceutical Management Plus. Arlington, VA: Management Science for Health

Kenya National Bureau of Statistics (KNBS) and ICF Macro. 2010. *Kenya Demographic and Health Survey 2008/09*. Calverton, Maryland.

Kovner, Christine T., Brewer, Carol S., Fairchild, Susan, Poornima, Shakthi, Kim, Hongsoo, Djukic, Maja. 2007. Newly Licensed RNs' Characteristics, Work Attitudes, and Intentions to Work. *American Journal of Nursing* 107 (9): 58-70.

Matterson, Anna-Carin Kandimaa and Michael Moeller. 2010. *Are We Reaching the Poor and Vulnerable? Interpretation of Data for Policy Implementation: A Review of Findings from Kenyan Health System Related Studies.* German Technical Cooperation (GTZ).

Médecins Sans Frontières (MSF). 2007. *Help Wanted: Confronting the Health Worker Crisis, MSF Experiences in Southern Africa.*

Ministry of Health (MOH). 1999. *National Health Sector Strategic Plan I (1999-2004).*

----------. 2002. *Kenya National Standard Treatment Guidelines.* Nairobi.

----------. 2003. *Kenya Essential Medicines List.* Ministry of Health: Nairobi

----------. 2005. *Reversing the Trends: The Second National Health Sector Strategic Plan II 2005-2010 (NHSSP II).* Nairobi.

----------. 2006a. *Monitoring and Evaluation of Health Sector Performance: Framework and Action Plan 2006/2007-2009/2010.* Ministry of Health: Nairobi.

----------. 2006b. *Report on Human Resource Mapping and Verification Exercise.* Ministry of Health: Nairobi.

----------. 2006c. *Norms and Standards for Health Service Delivery.* Ministry of Health, Nairobi.

----------. 2006d. *Report on Human Resource Mapping and Verification Exercise.* Ministry of Health, Nairobi.

----------. 2006e. *2004 Service Availability Mapping (SAM).* Ministry of Health in collaboration with the World Health Organization.

----------. 2007. *Reorganization, Staffing and Regularization of the Operations and Functions of the Pharmacy and Poisons Board.* Ministry of Health: Nairobi

----------. 2008a. *Health Information System Policy 2009-2014.* Ministry of Health: Nairobi.

----------. 2008b. *Report of the KEMSA Task force.* Ministry of Health: Nairobi.

Ministry of Medical Services. 2008a. *Facts and Figures on Health and Health Related Indicators, 2008.* Nairobi. Available at: http://www.publichealth.go.ke/index.php?option=com_docman&task=cat_view&gid=15&Itemid=35

----------. 2008b. *Kenya National Pharmaceutical Policy 2008.* Ministry of Medical Services: Nairobi.

----------. 2008c. *Ministry of Medical Services Strategic Plan, 2008-2012.* Ministry of Medical Services: Nairobi.

----------. 2009. *Supervision and Monitoring and Evaluation Report for the Period July-September 2009.*

Ministry of Medical Services, Pharmacy and Poisons Board. 2010. *Licensed Pharmacist Premises 2010 & Licensed Pharmaceutical Technologist Premises 2010.* (Website.) Accessed June 24, 2010: http://www.pharmacyboardkenya.org/index.php?id=117.

Ministry of Medical Services & Management Sciences for Health, Strengthening Pharmaceutical Systems (MOMS & MSH/SPS). 2008a. *Report on Leakage and Wastage of Health Commodities in the Public Sector Supply Chain.* Nairobi

----------. 2008b. *Report on 2007/08 Medicines and Medical Supplies Price Survey in the Public Health Sector.*

Ministry of Medical Services & Ministry of Public Health and Sanitation (MOMS & MOPHS). 2008. *Indicator and Standard Operating Procedure Manual for Health Workers.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

----------. 2009a. *2009 Client Satisfaction Survey.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi

----------. 2009b. *Final Report on the Review of the Partnership and Coordination Component of AOP 3 for the Kenya Health Sector*. Nairobi.

----------. 2009c. *Guidelines for the Appropriate Use of Medicines in Kenya.* Nairobi

----------. 2009e. *Health Management Information System (HMIS): Review of Softwares in the Health Sector.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

----------. 2009f. *Health Sector Strategic Plan for Health Information System 2009-2014*. Nairobi.

----------. 2009g. *Report of the Assessment of Health Information System of Kenya*. Nairobi.

----------. 2010a. *Clinical Guidelines for Diagnosis and Treatment of Common Conditions on Kenya.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

----------. 2010b. *Kenya Essential Medicines List.* (Not yet released)

----------. 2010c. *Kenya Health Policy Framework 1994–2010: Analysis of Performance, Health Situation Trends & Distribution, 1994-2010, and Projections for 2011 – 2030.* Nairobi.

----------. 2010d. *Kenya National Pharmaceutical Policy.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

----------. 2010e. *Master Facility List February 2010*. Accessed June 2010 http://www.kenyahealthfacilities.net/.

----------. 2010f. *Master Facility List: Implementation Guide.* Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

----------. 2010g. *National Human Resources for Health Strategic Plan 2009–2012*. Ministry of Medical Services and Ministry of Public Health and Sanitation: Nairobi.

Ministry of Public Health and Sanitation (MOPHS). 2008. *of Public Health and Sanitation Strategic Plan, 2008-2012.* Nairobi.

Muchiri, Stephen N. 2010. *Harmonizing budget cycles: Lessons for advocates.* Health Systems 20/20. Bethesda: Abt Associates.

Muchiri, Stephen N. and John James. 2006. *HR mapping of the health sector in Kenya: The foundation for effective HR management.* HLSP Institute Technical Brief. London. Available at http://www.hlsp.org/LinkClick.aspx?fileticket=eky0oOnoNQA%3D&tabid=1715&mid=3388

Mutungi, A., S. Harvey, J. Kibaru, H. Lugina, S. Kinoti, L. Jennings, T. Bornstein, and E. Hizza. 2008. Kenya: Assessment of Health Workforce Competency and Facility Readiness to Provide Quality Maternal Health Services. *Operations Research Results.* Published for the United States Agency for International Development by the Quality Assurance Project. Bethesda, MD: University Research Co., LLC (URC).

National AIDS and STI Control Programme (NASCOP). 2009. *Kenya AIDS Indicator Survey 2007.* Nairobi.

National AIDS Control Council (NACC). 2008. *Kenya National AIDS Spending Assessment 2008.* Nairobi.

National Coordinating Agency for Population and Development (NCAPD). 2005. *Kenya Service Provision Assessment Survey 2004*. Nairobi: National Coordinating Agency for Population and Development, Ministry of Health, Central Bureau of Statistics, and ORC Macro.

----------. 2009. *2007 Kenya Malaria Indicator Survey*. Nairobi: National Coordinating Agency for Population and Development, Division of Malaria Control, Kenya National Bureau of Statistics.

Ndavi, P. M, S. Ogola, P. M. Kizito & K. Johnson. 2009. *Decentralizing Kenya's Health Management System: An Evaluation.* Nairobi: University of Nairobi, National Coordinating Agency for Population and Development, ORC Macro.

Ndegwa, Thomas, Eric Nyadimo & Milka Juma. 2008. *Rapid Review/Stocktaking of the DANIDA Support to Ministry of Health's Monitoring, Evaluation and Health Management Information Systems.* DANIDA.

Ndetei, D. M., Khasakhala, L., Omolo, J. O. 2008. Incentives for health worker retention in Kenya: An assessment of current practice. *EQUINET discussion paper 62.* Harare: AMHF, EQUINET, ECSA-HC.

Nursing Council of Kenya. 2009. *National Nurses Association of Kenya Code of Ethics and Standards.* Nairobi. Available at http://www.kacc.go.ke/docs/nnak-code.pdf.

Office of the President, Directorate of Personnel Management. 2005. *Public Sector Workplace Policy on HIV and AIDS.* Nairobi.

Salentine S, W. Gichuhi, & A. Hyslop. 2007. *Use of HIV/AIDS Information in Kenya.* Measure Evaluation.

Sergon, Kibet. 2009. Presentation to the DPHK: Highlights on Health Information System (HIS).

Stansfield, Sally, Nosa Orobaton, David Lubinski, Steven Uggowitzer, Henry Mwanyika. 2008. *The Case for a National Health Information System Architecture: A Missing Link to Guiding National Development and Implementation.* WHO, HMN.

Transparency International Kenya. 2009. East Africa Bribery Index. Nairobi.

Wamai, Richard. 2009. The Kenya Health System—Analysis of the situation and enduring challenges. *Japan Medical Association Journal* 52(2):134-140.

Wanjala, Pepela & E.A. Ogara. 2010. Presentation: Health Information System and Use of ICT in the Health Sector.

World Health Organization (WHO). 2000. *Health Systems: Improving Performance.* World Health Report 2000. Geneva.

----------. 2001. *Report of the Scientific Peer Group on Health Systems Performance Assessment.* Geneva. Accessed September 26, 2006: http://www.who.int/health-systems-performance/sprg/report_of_sprg_on_hspa.htm.

----------. 2002. Death and DALY Estimates for 2002 by Cause. Available at www.who.int/entity/healthinfo/statistics/bodgbddeathdalyestimates.xls.

----------. 2004. Medicines Regulation. *The World Medicine Situation*. Geneva.

----------. 2006a. Mortality Country Fact Sheet 2006: Kenya. World Health Organization. (http://www.who.int/whosis/mort/profiles/mort_afro_ken_kenya.pdf)

----------. 2006b. *World Health Report 2006-Working Together for Health.* Geneva: WHO.

----------. 2007. *Everybody Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action.* Geneva: WHO.

World Bank. 2009. *Public Sector Healthcare Supply Chain Strategic Network Design for KEMSA: Driving Service Improvements through Supply Chain Excellence.* Kenya: Improving Health Systems. Available at http://siteresources.worldbank.org/INTHDNETWORK/Resources/Report_Kenya.pdf .

----------. 2010. *World Development Indicators Database (WDI) 2010.* Washington D.C.: World Bank. Available at http://data.worldbank.org/data-catalog/world-development-indicators/wdi-2010.

Xu, Ke, Chris James, Guy Carrin, and Stephen Muchiri. 2006. *An Empirical Model of Access to Health Care, Health Care Expenditure, and Impoverishment in Kenya: Learning from Past Reforms and Lessons for the Future.* Discussion Paper 3. Geneva: World Health Organization. Available at http://www.who.int/health_financing/documents/dp_e_06_3-access_kenya.pdf.

ANNEX A – KENYA PROCESS DESCRIPTION

Below is a brief description of the HSA process:

STEP 1. PREPARING THE HEALTH SYSTEMS ASSESSMENT

Planning/prep: HSA scope and schedule determined through communications with ministries of health and USAID Mission via emails, conference calls, and discussions with local HS 20/20 representative. The health ministries and other stakeholders help determine:

- a methodological approach that maps out health systems data sources at national, provincial and district levels;
- priority questions and issues to be explored;
- key informants to be interviewed and other stakeholders to be involved;
- sites to visit.

STEP 2. CONDUCT HEALTH SYSTEMS ASSESSMENT

Data collection is a participatory and country-specific process designed to bring together the HS 20/20 team, USG and international partners, and local level consultants with expertise in the six technical areas of the assessment.

Before the trip: The majority of health systems data will be collected through literature review of secondary sources.

Data collection in Kenya: In addition to literature reviews, key stakeholders involved in the national-, provincial-, and district-level health system strengthening efforts in Kenya will be invited to participate in key informant interviews to provide primary data and validate what has been collected through secondary sources.

In-country agenda: One trip of approximately 15-20 days with extensive health ministry and stakeholder involvement to include:

- Stakeholder engagement: The team will meet with the ministries of health and USG/Kenya to review the priorities for the assessment, finalize the key research questions, review the field schedule and logistics, and review the presentation and agenda for the stakeholder workshop.
- Consensus Building Meeting: In preparation for selected interviews and meetings at both the national and sub-national levels (through select site visits)., a ½ day workshop will be held with key stakeholders before data gathering commences. In this meeting the assessment team will review the concept and process of the HSA, collect additional documents for review, identify any missing key informants, and answer any outstanding questions to pave the way for the key informant interviews. The invitation for this meeting should come from the Ministries of Health.

- National Level Interviews: HS 20/20 team and advisors will spend approximately five days interviewing select national level health officials. Interviews with the key informants will include, but not be limited to, MOH officials, USG Implementing Partners, other donors, private and commercial partners, and civil society organizations. These interviews will be conducted either as a team or as individuals, in order to minimize the burden on the interviewee, depending on the technical area of focus.
- Sub-national/Facility Level Data Collection: Site visits will help in understanding health system performance at the service delivery level. This step will take up the bulk of the team's time in Kenya. Team site visits to three provincial health offices, six district health offices and district hospitals, and six health facilities (21 sites total) are planned. At the end of the trip, the team would present initial findings to the MOH, USG staff, and local stakeholders.

STEP 3. ANALYZE DATA AND PREPARE DRAFT REPORT

The HS 20/20 team will work with a small team of local partners to prepare a draft report for review and consideration by key stakeholders. The writing team will triangulate health systems data and information to provide a detailed picture of the system as a whole. A first draft of the HSA report will be delivered within 4-6 weeks of the trip for a detailed review by the health ministries, USG Stakeholders, and other engaged stakeholders. In our experience, the report would be finalized in approximately four weeks depending on the number of reviewers, the extent of changes requested, and how quickly edits are received.

STEP 4. VALIDATE FINDINGS WITH LOCAL STAKEHOLDERS

HS 20/20 will host a workshop for local stakeholders to review assessment findings. The validation workshop will provide stakeholders with an opportunity to review the report. Special emphasis will be put on looking at the strengths and weaknesses of the system and recommendations to strengthen it.

STEP 5. DEVELOP A PLAN OF ACTION AND SUBMIT REPORT

The final step of the assessment will be providing technical assistance to develop action plans, as needed, for planning in the health ministries. The HS 20/20 team will work closely with health ministries' directors and program managers, as well as key policy makers, donors and other key stakeholders to determine what actions to take based on the findings. The action plan will clearly outline what action(s) to be taken, who will be responsible for each action, and when the actions should be completed. Once the final report is approved by the Ministries, it will be edited and formatted which will take an additional week. The report will be submitted electronically for dissemination among implementing partners and stakeholders.

ANNEX B – INTERVIEW LIST

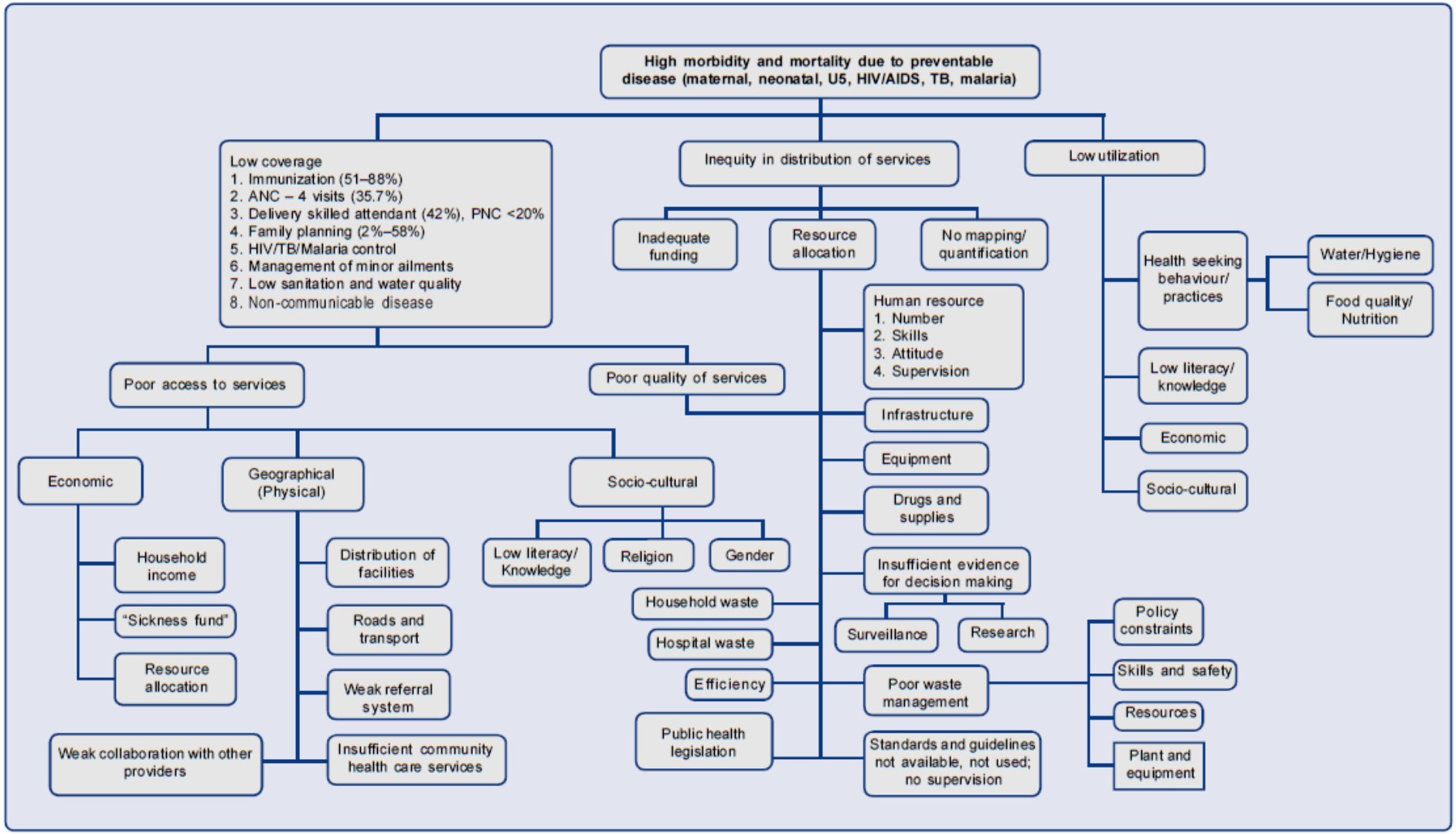
Organization	Interviewee #1	Interviewee #2	Interviewee #3
APHIA	D. Adriance		
CDC	T. Oluoch		
Chair/ICC Procurement	Amb. Madete		
CHAK	Dr. Mwenda Rukunga		
CHAK	Joseph Oyongo		
DANIDA	Ole Thonke		
DFID	T. Daly	J. Aitken	
Division of Child Health/Vaccine/RH	Dr. T. Kamau	Dr. Mugiro	
DPHK (Donor Coordinator)	Sandra Erikson		
Global Fund CCM	Mrs. Nteere		
GTZ	C. Otieno		
Head/Community Service (MOPHS)	Dr. J. Mwitari		
Head/Div. of Disease Prevention	Dr. Akwale		
Head/Pharm. Policy & Coordination	Dr. N. Mucheru		
Head/Technical Planning (MOPHS)	Dr. Kitetu		
Health Care Financing/MOMS	S. Munga		
HENNET	B. Okundi		
HMIS-MOMS	Dr. Nzioka	Dr. Pepela	
HMIS-MOMS	Dr. Osumba		
HR ICC CHAIR (MOMS)	Mr. Nyanchoga		
HR-MOPHS	Mrs. Muchohi		
HSCC Chair	Permanent Sec.		
KEMSA	Dr. Wanjau	Dr. Wambua	
Kenya Bureau of Statistics	Mr. Kilele		
Kenya Medical Association	Dr. Sule		
Kenya Medical Training Colleges	Dr. Olango Onudi		
KEPSA	Dr. Gakombe		
Liverpool (Essential Health)	R. Pendame		
Macro International	E. Kunyanga		
Malaria Control Prog.	D. Memusi	A. Mbitho	R. Kiptui
MEDS	Dr. J. Masiga		
Ministry of Planning	J. Owuor		
Ministry of Public Health and Sanitation	Dr. S.K. Sharif		
Ministry of Public Service	B. Mutieri		

Organization	Interviewee #1	Interviewee #2	Interviewee #3
NACC	Dr. Muriithi		
NASCOP Manager	Dr. Muraguri		
NASCOP-HS 20/20	J. Setzer	A. Saade	
NHIF	Mr. Kerich		
Nursing Council of Kenya	O. Fredrick		
Nutrition	D. Wefwafwa		
Pharmacy & Poisons B.	Dr. Njue	Dr. Siyoi	Dr. Jayesh
Pharmacy Division	Dr. Mbuva		
Private for Profit Consortium	J. Maliti		
TB Programme	Dr. Sitienei		
Technical Planning-MOMS	Dr. Kiambati	Dr. Maina	
UNICEF	Dr. K. Ongwae		
USAID (HR)	P. Waithaka		
WHO	Rex Mpazanje		

ANNEX C – SITE VISITS

Province	Facility/Institution to be Visited
Coast	Coast PHMT
	Coast PGH HMT
	Kongowea Dispensary
	Shimo La Tewa Prison Health Center
	Msambeni HMT
	Tiwi Rural Health Training Center
	Waa dispensary
	Magodzoni dispensary
Rift Valley	Narok DHMT
	Narok District Hospital
	Kilgoris Catholic Hospital (FBO)
	Kericho DHMT
	Kericho District Hospital HMT
	Kericho Health Center
	Tenwek Hospital (FBO)
	Kambiaga HC
North Eastern	Garissa DHMT
	Korakora dispensary
	Garissa PGH HMT
	North Eastern PHMT
	Medina dispensary
	Young Muslim dispensary
	Ijara DHMT
	Ijara Hospital HMT
	Ijara Health Center

ANNEX D - CAUSES OF PREVAILING HEALTH CHALLENGES IN KENYA



SOURCE: MOPHS 2008

ANNEX E - SERVICE DELIVERY UNITS NEEDED AND AVAILABLE BY LEVEL OF CARE

Province	Population		Service delivery units				
			Level 1	Level 2	Level 3	Level 4	Level 5
Central	3,909,728	Required service delivery units	782	391	130	39	4
		Existing health facilities	-	372	89	65	
		Gaps in service delivery units	**-**	**19**	**41**	**-26**	**4**
Coast	2,801,356	Required service delivery units	560	280	93	28	3
		Existing health facilities	-	334	42	64	
		Gaps in service delivery units	**-**	**-54**	**51**	**-36**	**3**
Eastern	5,103,110	Required service delivery units	1,021	510	170	51	5
		Existing health facilities	-	692	80	65	
		Gaps in service delivery units	**-**	**-182**	**90**	**-14**	**5**
Nairobi	2,563,297	Required service delivery units	513	256	85	26	3
		Existing health facilities	-	381	54	58	
		Gaps in service delivery units	**-**	**-125**	**31**	**-32**	**3**
North Eastern	1,187,767	Required service delivery units	238	119	40	12	1
		Existing health facilities	-	68	12	8	
		Gaps in service delivery units	**-**	**51**	**28**	**4**	**1**
Nyanza	4,804,078	Required service delivery units	961	480	160	48	5
		Existing health facilities	-	333	117	98	
		Gaps in service delivery units	**-**	**147**	**43**	**-50**	**5**
Rift Valley	7,902,033	Required service delivery units	1,580	790	263	79	8
		Existing health facilities	-	1,006	161	100	
		Gaps in service delivery units	**-**	**-216**	**102**	**-21**	**8**
Western	3,853,936	Required service delivery units	771	385	128	39	4
		Existing health facilities	-	196	94	68	
		Gaps in service delivery units	**-**	**189**	**34**	**-29**	**4**
National Total	32,125,305	Required service delivery units	6,425	3,213	1,071	321	32
		Existing health facilities	-	3,382	649	526	20
		Gaps in service delivery units	**-**	**-169**	**422**	**-205**	**12**

Source: (MOH 2006c)

ANNEX F - PHARMACEUTICAL LAWS

Some of the laws that have a bearing on the pharmaceutical sector include:

- Narcotic Drugs and Psychotropic Substances Act of 1994
- Dangerous Drugs Ordinance of 1933 (Cap 245)
- Food, Drugs and Chemical Substances Act (Cap 247)
- Public Health Act (Cap. 242)
- Medical Practitioners and Dentists Act (Cap 253)
- Use of Poisonous Substances Act (Cap 247)
- Trading in Prohibited Goods Act (Cap 519)
- Pesticides Control Act (Cap. 346)
- Veterinary Surgeons Act (Cap. 366)
- A proposed anti-counterfeit Act which is in the process of being enacted.