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# KENYA HEALTH SYSTEM ASSESSMENT



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## Abbreviations

AIDS	acquired immune deficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARVs	antiretroviral drugs
CDC	Centers for Disease Control and Prevention
CRA	County Revenue Account
CPD	continuing professional development
DHIS2	District Health Information System 2
DHSCIA	Department of Health Sector Coordination and Intergovernmental Affairs (Ministry of Health)
DivMEHRDI	Division of Monitoring and Evaluation, Health Research Development, and Informatics
FBO	faith-based organization
FY	fiscal year
GDP	gross domestic product
GIS	geographic information systems
Global Fund	Global Fund to Fight AIDS, Tuberculosis, and Malaria
HISICC	Health Information Systems Interagency Coordinating Committee
HIV	human immunodeficiency virus
HMIS	health management information system
HRH	human resources for health
HSA	health system assessment
HSIF	Health Sector Intergovernmental Forum
HP+	Health Policy Plus
iHRIS	integrated Human Resource Information System
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic and Health Survey
KEC	Kenya Episcopal Conference



KEML	Kenya Essential Medicines List
KEMRI	Kenya Medical Research Institute
KEMSA	Kenya Medical Supplies Authority
KEPH	Kenya Essential Package of Health
KHHEUS	Kenya Household Health Expenditure and Utilization Survey
KHSSP	Kenya Health Sector Strategic Plan
Ksh	Kenyan shillings
MDGs	Millennium Development Goals
MEDS	Mission for Essential Drugs and Supplies
MOH	Ministry of Health
NASCOP	National AIDS/STD Control Programme
NCDs	noncommunicable diseases
NGO	nongovernmental organization
OOP	out-of-pocket
PEPFAR	U.S. President's Plan for Emergency AIDS Relief
PPB	Pharmacy and Poisons Board
SAGAs	semi-autonomous government agencies
SDGs	Sustainable Development Goals
STD	sexually transmitted disease
SUPKEM	Supreme Council of Kenya Muslims
TB	tuberculosis
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UHC	universal health coverage
UN	United Nations
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development
WHO	World Health Organization

# Executive Summary

## Purpose

This 2017 Health System Assessment (HSA), conducted by the Health Policy Plus (HP+) project, funded by the U.S. Agency for International Development (USAID) and U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), provides a snapshot of the current state of Kenya’s health system in terms of the six “building blocks” identified in the World Health Organization’s (WHO) health systems framework: service delivery, human resources for health (HRH), health information systems, medical products and technologies, financing, and leadership and governance. The approach identifies constraints and facilitating factors for the delivery of health services judged against the WHO’s performance assessment criteria.<sup>1</sup>

Sustaining improvements in health outcomes requires a nuanced understanding of the health system. The purpose of this assessment is to present an overview of the current strengths and weaknesses of Kenya’s health system to serve as a useful compilation of evidence and offer recommendations that can be used to inform policy and planning efforts. The last HSA was conducted in 2010. The 2017 assessment reviews achievements accomplished over the last six years and addresses new developments such as Kenya’s transition to a devolved system of governance and the country’s progress toward achieving universal health coverage (UHC).

## Methodology

To conduct this assessment, HP+ adapted USAID’s *Health Systems Assessment Approach: A How-To Manual, Version 2.0* (Health Systems 20/20, 2012). The 2017 HSA was carried out by a team of nine experts drawn from Ministry of Health (MOH) and HP+ staff and consultants with experience across all six health system building blocks. Team members conducted a thorough desk review of relevant documents, including the 2010 Constitution, relevant acts of Parliament governing devolution, and key health policy documents such as the *Kenya Health Policy, 2014–2030*, *Kenya Health Act of 2017*, and the health sector strategic plan. In-depth interviews conducted with key stakeholders at the national and county levels provided additional information to supplement the desk review and fill any remaining gaps. The MOH provided technical experts from the Policy and Planning Division to guide the assessment process and ensure that the document is responsive to Kenya’s policy and health investment needs. This assessment is based on data current as of December 2017.

## Key Findings and Recommendations

The 2017 HSA makes recommendations for health systems strengthening across all six of the WHO building blocks, which are presented in the modules that follow. A summary of key recommendations and findings is presented below, organized by building block.

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<sup>1</sup> WHO performance assessment criteria include equity, access, coverage, quality, efficiency, and sustainability.

## **Governance**

With the adoption of the 2010 constitution and the onset of devolution, Kenya's governance architecture and political environment changed dramatically. Under the new constitution, a range of political, administrative and financial functions have been delegated to 47 semi-autonomous counties established after the 2013 elections. These changes have entailed substantial changes in the health sector's governance structures, with the national level remaining responsible for overall leadership and regulatory and policy guidance, while county governments have assumed responsibility for health service delivery. In June 2017, parliament passed a new health law, the *Health Act No.21 of 2017*, bringing scattered pieces of health legislation together under one unified framework. The new law, which is more intentional, establishes a rights-based approach to health, clarifies the roles of national and county governments, creates new regulatory bodies, and provides guidance on issues such as health financing and private sector participation. However, the Health Act has not been disseminated and, therefore, the proposals on new regulatory bodies and mechanisms have not been fully instituted.

Although Kenya has made great strides, there remains a need to further strengthen institutions and systems, particularly at county level. Counties are hindered by a lack of clear, uniform management structures, limited capacity to develop appropriate health laws or to effectively integrate civil society into the decision-making process. The lack of health-related advocacy civil society organizations at county level limits the ability of civil society to effectively engage in the policy process. Effective coordination between national and county governments is hampered by the weak performance of the Health Sector Intergovernmental Forum (HSIF). In addition, the assessment found there to be weak enforcement of health laws and norms, especially in the private sector; a lack of clarity regarding the functions and value of proposed regulatory institutions in the newly enacted Health Law (2017); and poor coordination and accountability among the health sector's professional bodies.

### **Recommendations:**

1. Strengthen health sector management structures at county level and build counties' capacity, including their ability to frame necessary health laws and integrate civil society in the decision-making process by improving the effectiveness of coordination bodies (e.g., the HSIF and the department of Health Sector Coordination and Intergovernmental Relations).
2. Improve enforcement of health laws and norms, especially in the private sector by actively engaging the private sector through the partnership framework and establishing a mechanism to bring all regulatory bodies into one policy dialogue space.
3. Disseminate the Health Act, 2017 and raise awareness of the mandate and responsibilities of the new authority

## **Health financing**

The devolved system has dramatically changed the way health services in Kenya are delivered and financed. Counties now have considerable autonomy over how they finance primary and secondary healthcare. The Government of Kenya has committed to achieving UHC and set ambitious targets for improving health outcomes, including financial protection, including drafting a financing strategy (not yet finalized) to align key features of the health financing system with UHC objectives—ensuring access to quality health services without financial hardship. The current macroeconomic context suggests that Kenya will

have the opportunity to invest more public resources in health. Yet, this opportunity may not translate into more money for health or advance UHC without concerted efforts by the government to effectively pool and target resources.

The majority of resources for health are generated at the national level, with resources for service delivery flowing from the national level to county governments through County Revenue Accounts (CRAs). The government's ability to raise tax revenue impacts the availability of resources for health. External funding is declining as a proportion of total health expenditure. Increased government spending has filled some (but not all) of the resulting gap and out-of-pocket health spending has increased, placing a high burden on households. At county level, allocation of resources to health is at the discretion of the counties and health allocations vary considerably across counties from year-to-year and over three-quarters of county allocations to health are spent on personnel.

### **Recommendations:**

1. Continue improving overall tax collection, including developing county capacity to collect locally-generated tax revenues and considering pooling high out-of-pocket expenditures to pre-payment schemes.
2. Consider health when allocating shareable revenue to counties to ensure that they have sufficient resources to meet their specific health and service delivery needs.
3. Allocate enough resources to health at county level (based on a clear understanding of resource needs), effectively target those resources to poor and vulnerable populations.
4. Strengthen NHIF's ability to effectively play its role as a social health insurer by increasing enrollment, with particular emphasis on enrolling informal sector workers; clearly defining and communicating the benefits package to members and providers; pooling resources across schemes covering different populations; improving payment mechanisms to better control both cost and quality; and making necessary institutional and legal reforms.
5. Move away from line-item, input-based budgeting and accelerate program-based budgeting reforms.

### **Service delivery**

Under the 2010 constitution, responsibility for health service delivery—apart from tertiary services—is fully devolved to county governments. The *Kenya Health Policy, 2014–2030* outlines changes in health service delivery levels, with the system transitioning from the current six-level structure to a four-level structure by 2030. The package of services provided at each level of care is defined in the *Kenya Essential Package of Health (KEPH)*, which is intended to ensure that those who need services are able access them without undue financial hardship. The KEPH is geared toward achieving UHC as envisioned in fourth health sector strategic plan. However, implementation of KEPH is hindered by the lack of adequate infrastructure for delivery of KEPH services and persistent geographic inequities in access to care, quality of health services, and service utilization. For example, 8.7 percent of households in the poorest quintile experience catastrophic health expenditure. The quality of services is affected by inadequate adherence to clinical guidelines, to which inadequate supervision is a contributing factor. The functions of regulatory bodies are insufficiently coordinated and there is a lack of standardized mechanisms to guide partnerships between public and private sectors in health service delivery. The perceived poor quality of services at primary level, together with ongoing challenges with referral systems, leads individuals to

seek care at a higher level than necessary, which negatively impacts the overall efficiency of the health system.

**Recommendations:**

1. Expand availability of KEPH services by continuing needs-based investment in health infrastructure (both county and national governments) and allocating sufficient resources for outreach services to reach underserved and hard-to-reach populations, while at the same time creating demand.
2. Invest in improving the effectiveness of referral systems and encourage patient compliance with the referral strategy to make the best use of available specialists.
3. Strengthen quality assurance by establishing a mechanism to coordinate the functions of health sector regulatory bodies, engaging communities in managing service quality at nearby facilities, and ensuring adequate budget allocation for effective implementation of integrated supervision.

***Human resources for health***

This assessment comes at a time when Kenya is keen on achieving UHC, not only from a financing standpoint, but also by ensuring that HRH are equitably distributed to match population needs. Health goals and strategic plans at both the national and county levels consistently mention HRH as a key determinant of achieving health goals. The shortage of HRH in the public sector has featured prominently in public discourse on the state of Kenya's health system. There remains a scarcity of health specialists and available specialists are unevenly distributed across counties, leading to inequities in the quality and availability of specialized health services, particularly in northern counties. Kenya has also experienced numerous service delivery interruptions over the past five years due to health worker industrial action, yet capacity to manage industrial unrest is weak at both national and county levels. Although human resources account for the bulk of health expenditure across all counties, the shortage of medical staff remains a significant factor limiting access to healthcare. County governments are faced with a dilemma: on one hand, they need to address the unsustainable wage bill flowing out of HRH; on the other hand, they are under pressure to address staffing shortfalls by employing additional staff. Kenya also lacks a national HRH capacity-building program to support counties.

Key informants indicated that health workers feel that county governments lack the necessary competencies to provide effective oversight for HRH. To address these shortcomings, health workers have strongly advocated for an oversight body. In response, the 2017 Health Act created the Health Professions Oversight Authority. However, there remains a lack of clarity on the role of the newly established authority.

The health system's HRH planning capacity is hampered by the lack of private sector data, which hinder the government's ability to ensure adherence/compliance with standards. Evidence-based decision making and management of HRH is also hindered by inconsistent utilization of the integrated Human Resource Information System (iHRIS) and a lack of interoperability across HRH-related information systems.

**Recommendations:**

1. Build capacity within senior leadership at both levels of government on the politics of industrial relations, conflict management, and negotiation skills.

2. Address shortages and disparities in the availability of specialists by exploring incentives to attract specialists, encouraging counties to coordinate and share specialists, and considering the use of conditional grants from the national government to incentivize counties to deploy specialized staff, particularly in underserved counties.
3. In consultation with counties, develop a standardized HRH capacity-building program that is linked to overall health system priorities.
4. Foster linkages between the public and private sectors to meet HRH goals and implement the provision of the 2017 Health Act that requires private providers to report HRH data to the national government.
5. Enforce healthy public wage bill to government spending ratios, while continuing to explore ways to increase efficiency and promote the productivity of the health workforce.
6. Fast-track interoperability of existing health information system platforms to fully optimize iHRIS and consider using conditional grants to incentivize counties to update iHRIS.

### ***Health management information systems***

Kenya's health sector has numerous program-specific/disease-based monitoring and evaluation (M&E) systems. However, these systems operate separately, not sharing data and information with each other. Most of these systems satisfy the reporting needs of funding agencies and implementing partners, but seldom meet the information needs of the government or the health system as a whole. Moreover, many of the key components of Kenya's health management information system (HMIS) are not interoperable. The absence of a unified approach to monitoring programmatic and sector performance has created duplication of effort; inefficiencies; lagging capacity in the analysis of health sector performance and implementation of a comprehensive HMIS; and a weak culture of data demand and the use of information for decision making. DHIS2 has been rolled out countrywide and is widely accepted as the aggregate reporting system. However, its use is limited by data-quality concerns. In its effort to create and maintain a strong HMIS at national and county levels, the MOH faces challenges, including shortages of and inappropriate skill mix among technical staff, inadequate budgetary allocations, and insufficient infrastructure. There is a pressing need to develop a HMIS legal and regulatory framework to address issues such as enforcement of private sector reporting, which is almost non-existent. For example, although a significant proportion of Kenya's population seek health services from private facilities, these facilities are not included in existing reporting systems. Implementation of key HMIS policies and guiding documents at all levels remains inadequate, as does monitoring of the implementation of the HMIS policy and other key policy documents.

A wide range of stakeholders play a role in Kenya's HMIS, including donors, private sector providers, and counties. Aligning the activities of all these stakeholders with the policy direction set by the MOH will require effective coordination and leadership. Although a national HMIS coordination mechanism, the Health Information Systems Interagency Coordinating Committee (HISICC) has been established, it is not yet functioning as planned. This constitutes a major leadership, particularly as the national government can no longer impose HMIS requirements on counties, which must instead be motivated to follow national policies and guidelines voluntarily.

## **Recommendations:**

1. The Government of Kenya should provide adequate budget support for HMIS at all levels.
2. Strengthen HMIS leadership by institutionalizing the HISICC at national level and replicating the HISICC at county level.
3. Establish a robust HMIS legal and regulatory framework, including developing detailed legislation to ensure implementation of the Health Act and enforce reporting from all service delivery units, including private facilities.
4. Institutionalize DHIS2 data quality assurance measures at all levels.
5. Develop and implement a data analysis framework and provide continuous capacity building on data analysis and the generation and use of data analytic products for government staff at all levels.

## ***Medical products, vaccines, and technologies***

Efficient organization of pharmaceuticals and other medical products is essential to meeting health system goals. Since adoption of the 2010 constitution, the country has made important changes to the institutional arrangements and legal and regulatory frameworks related to medical products, vaccines, and technologies. Given the devolution of health services and the significant role the private sector plays in procurement and distribution, the structure and systems of medical products management in Kenya have become quite complex. Pharmaceutical Services Unit of the MOH is responsible for sector-wide pharmaceutical policy development and oversight of policy implementation, development of norms and standards, capacity building, and provision of technical assistance to counties. However, the unit's oversight role at the county level has not taken root due to resource constraints and a prevailing mistrust between county- and national-level institutions.

In 2013, the Kenya Medical Supplies Authority (KEMSA) was established through an act of Parliament, which changed KEMSA from a public agency to a not-for-profit, self-sustaining commercial business that provides pharmaceutical products to government clients, including county health facilities. KEMSA is responsible for the procurement and distribution of the bulk of pharmaceutical products and medical supplies for public sector health facilities. In the private sector, the Mission for Essential Drugs and Supplies (MEDS), is the largest procurement and distribution agent. There is a growing need for efficient procurement, management, and distribution of medicines at the county level. Under the devolved system, county departments of health have full responsibility for procurement and distribution of health commodities. Yet, counties are struggling to finance health products and technologies. Although county departments of health procure pharmaceutical and other medical supplies, they continue to face health commodity stockouts and delays in the procurement of essential supplies. Supply chain challenges are exacerbated by the fact that, when commodities ordered by counties from KEMSA are not available, KEMSA does not communicate this until they deliver commodities to the county.

The Pharmacy and Poisons Board (PPB) is the regulatory agency that oversees pharmacies and the pharmaceutical industry. Beyond KEMSA and MEDS, mechanisms to ensure the quality of county procurement of health products and technologies is weak. A high number of unregistered pharmacies and drug shops exist in Kenya and a significant number of pharmacies provide in-house consultations—a practice that lies well beyond their mandate. Counterfeit medicines are also an important public health and safety issue in Kenya. Kenya

has the fourth highest adverse drug reactions reporting rate in Africa and in 2017, the Kenya Association of Pharmaceutical Industry estimated that counterfeit medicines accounted for approximately Ksh 9 billion (US\$100 million) in sales annually, constituting 20–25 percent of the total legal commercial pharmaceutical market.

The 2017 Health Act provides for the establishment of various new regulatory bodies and mechanisms, including a body that will regulate the licensing, manufacture, laboratory testing and inspection, contractors, advertising and promotion, and post-marketing surveillance for quality safety and disposal of health products and technologies. However, as the Act has not been disseminated, these structures have yet to be put in place.

**Recommendations:**

1. Prioritize dissemination and implementation of Health Act of 2017 to ensure that regulatory bodies and mechanisms established and functioning.
2. Decentralize and expand PPB inspection and regulatory functions and establish a mechanism under PBB to ensure the quality of health products and technologies procured at county level.
3. Increase support for inspection services to improve market surveillance and counteract the prevalence of counterfeit medicines.
4. Ensure increased and sustained resources for health products and technologies at county level through advocacy and by supporting legislation to allow county facilities to retain user fees.



# 1. Introduction

## Methodology

The 2017 Health System Assessment (HSA), conducted by the Health Policy Plus (HP+) project, funded by the U.S. Agency for International Development (USAID) and U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), provides a snapshot of the current state of Kenya’s health system in terms of the six “building blocks” identified in the World Health Organization’s (WHO) health systems framework: service delivery, human resources for health (HRH), health information systems, medical products and technologies, financing, and leadership and governance (WHO, 2007). To conduct this assessment, HP+ adapted USAID’s *Health Systems Assessment Approach: A How-To Manual, Version 2.0* (Health Systems 20/20, 2012). The approach identifies constraints and facilitating factors for the delivery of health services judged against the WHO’s performance assessment criteria<sup>2</sup> (WHO, 2012). Kenya last undertook an HSA in 2010. The 2017 assessment reviews achievements accomplished over the last six years and addresses new developments such as Kenya’s transition to a devolved system of governance and the country’s progress toward achieving universal health coverage.

Sustaining improvements in health outcomes requires a nuanced understanding of the health system. By offering an overview of the current strengths and weaknesses of Kenya’s health system, the 2017 Kenya HSA will provide a useful compilation of evidence that can be used to support policy and planning efforts, including the identification of appropriate investments.

The 2017 Kenya HSA was carried out by a team of nine experts drawn from Ministry of Health (MOH) and HP+ staff and consultants with experience across all six health system building blocks. Team members conducted a thorough desk review of relevant documents, including the 2010 Constitution (ROK, 2010), relevant acts of Parliament governing devolution, and key health policy documents such as the *Kenya Health Policy, 2014–2030* (MOH, 2014), *Kenya Health Act* (ROK, 2017), and the health sector strategic plan. In addition, the team conducted in-depth interviews with key stakeholders at the national and county levels, which provided additional information to supplement the desk review and fill any remaining gaps. Together, the desk review and key informant interviews helped the team understand the challenges facing Kenya’s health system and formulate actionable recommendations to inform ongoing policy development processes. The MOH provided technical experts from the Division of Policy and Planning to guide the HSA process and ensure that this assessment is responsive to Kenya’s policy and health investment needs. The 2017 Kenya HSA is based on data current as of December 2017.

## Country Overview

The Republic of Kenya is in East Africa, off the coast of the Indian Ocean. Approximately 582,646 square kilometers in size, the country is bordered by Ethiopia (to the north), Somalia (to the northeast), Tanzania (to the south and southwest), Uganda (to the west), and South Sudan (to the northwest). In 2010, Kenya enacted a new constitution (ROK, 2010) that provided for the devolution of governance functions to the county level. Following the

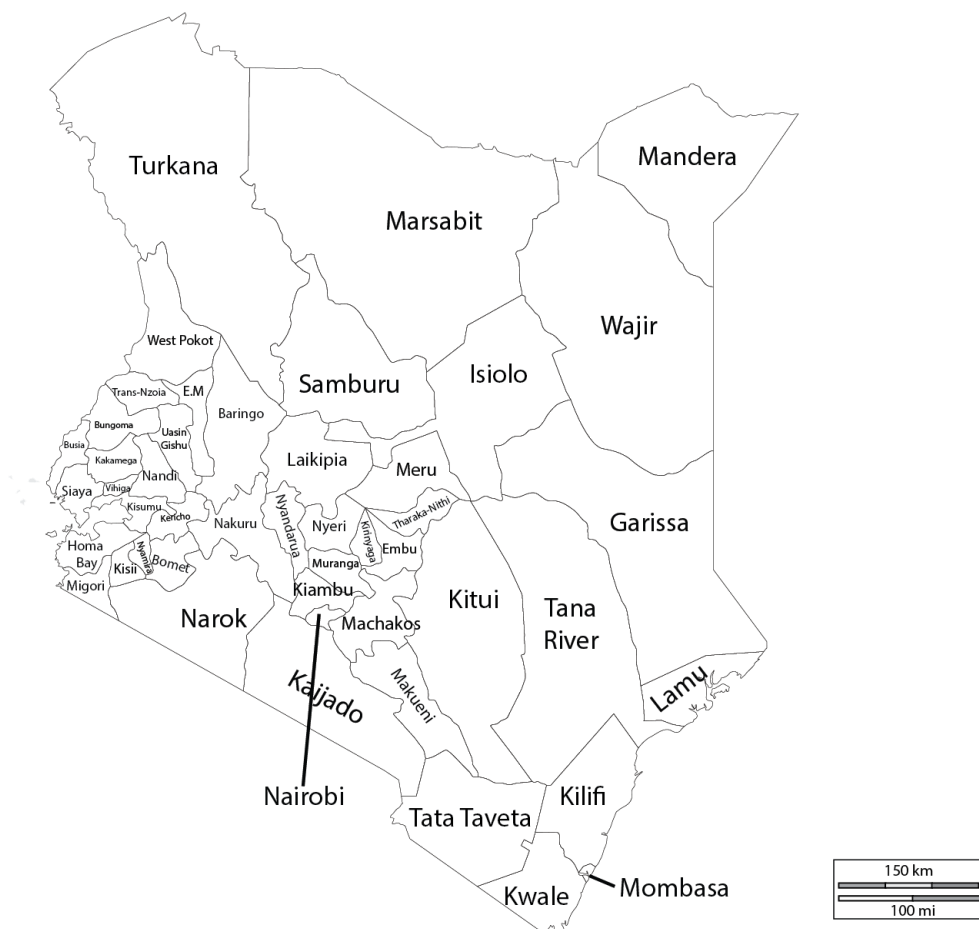
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<sup>2</sup> WHO performance assessment criteria include equity, access, coverage, quality, efficiency, and sustainability.

2013 elections, 47 semi-autonomous counties were established and assumed responsibility for these functions (see Figure 1.1).

Within the overarching “right to health” framework of the 2010 Constitution, service delivery priorities are guided by several key policy documents. Kenya’s overall policy direction is outlined in the Vision 2030. Within this broad framework, the health sector is guided by the *Kenya Health Policy, 2014–2030* (MOH, 2014) and the Sustainable Development Goals (SDGs). This guidance is translated into detailed objectives through the medium term in the Second Medium-Term Plan (2013–2017) (overall government, including the health sector) and the *Fourth Kenya Health Sector Strategic and Investment Plan, 2014–2018* (KHSSP IV) (MOH, 2016).

**Figure 1.1. Map Showing Counties in Kenya**



Source: Chief Cartographer, Republic of Kenya, 2014

Kenya is highly diverse, composed of more than 42 ethnic groups spanning three main cultural groups: Bantus, Cushites, and Nilotes. More than 60 languages are spoken throughout the country and English and Swahili are the national languages (KNBS et al., 2015).

### **Demographic trends**

Kenya’s population, estimated at 45.4 million in 2016 (KNBS, 2017), is growing more slowly than other countries in sub-Saharan Africa. Kenya’s annual population growth rate is 1.81 percent, below the regional average of 2.7 percent. According to the 2014 Kenya

Demographic and Health Survey (KDHS), the country has a total fertility rate of 3.9 births per woman (KNBS et al., 2015), which is below the sub-Saharan Africa regional average of 4.9 births per woman, but still higher than the 2030 national target of 2.6 births per woman (NCPD, 2013). The proportion of Kenya's population living in rural areas (74 percent) is higher than the regional average (60 percent) (World Bank, 2017a). Tables 1.1 and 1.2 below provide an overview of selected population indicators for Kenya and sub-Saharan Africa.

**Table 1.1. Selected Population Indicators, Kenya and Sub-Saharan Africa**

Indicator	Kenya	Sub-Saharan Africa
Population growth (annual %)	1.81	2.7
Urban population (% of total)	26.06	40.5
Population ages 0–14 (% of total)	40.87	42.9
Population ages 65+ (% of total)	2.92	3.1

Source: World Bank, 2017a

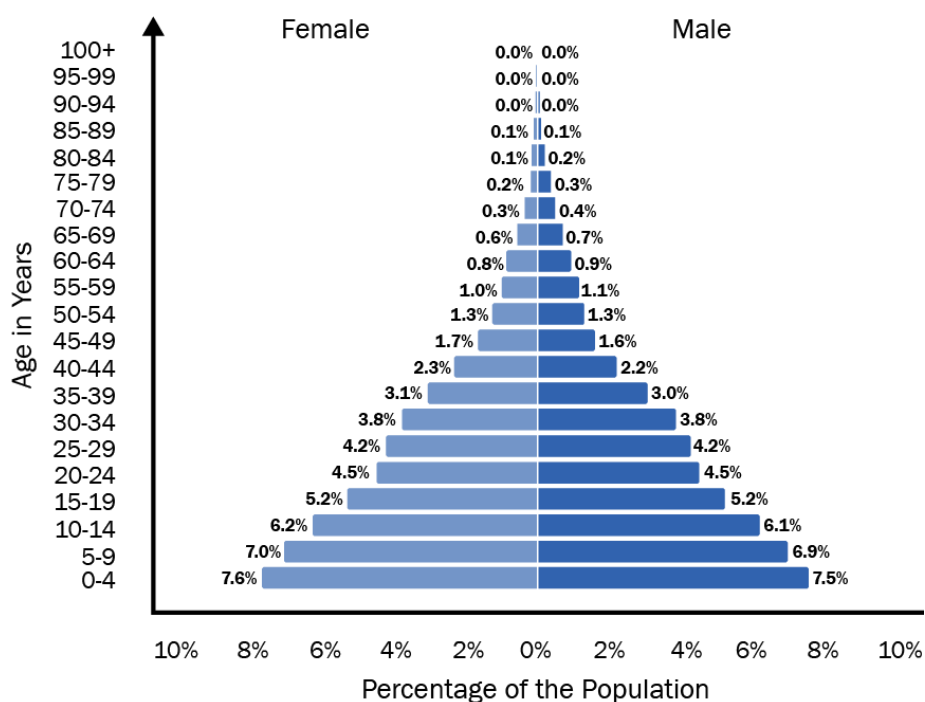
**Table 1.2. Selected Health-Related Demographic Indicators, Kenya**

Indicator	
Contraceptive prevalence (% of women ages 15–49)	58
Fertility rate, total (births per woman)	3.9
Pregnant women who received prenatal care (%)	95.5
Maternal mortality rate, per 100,000 live births	362
Infant mortality rate, per 1000 live births	39
Under-five mortality rate, per 1000 live births	52
Crude birth rate (%)	30.5
Crude death rate (%)	10.4
Population with access to improved source of drinking water (%)	71

Source: KNBS et al., 2015

As is the case in most of sub-Saharan Africa, Kenya's population structure is characterized by a "youth bulge" (see Figure 1.2). Youth between the ages of zero and 14 years constitute more than one-third (40.87 percent) of Kenya's population (UN, 2017).

Figure 1.2. Kenya Population Pyramid, 2017



Source: UN, 2017

### Epidemiological profile

The 2014 KDHS (KNBS et al., 2015) shows impressive improvements in health indicators, as shown in Table 1.3. However, despite this strong performance, Kenya did not achieve the Millennium Development Goals (MDGs), except MDG Six (halt and begin to reverse the spread of HIV). Nevertheless, Kenya is doing better than average in Africa for selected indicators.

Table 1.3. Selected Health Indicators for Kenya and Africa

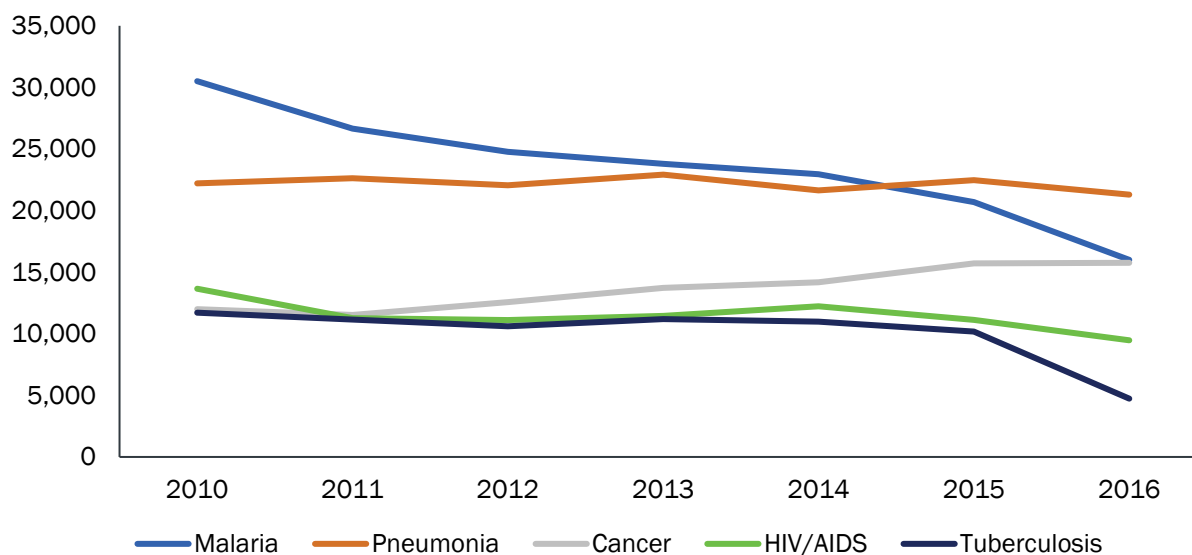
Indicator	Africa	Kenya			
	Africa Regional Health Report 2014	KDHS 2003	KDHS 2008/09	KDHS 2014	KHSSP IV (2014–2018) Target
Neonatal mortality rate (per 1,000 births)	32	33	31	22	15
Infant mortality rate (per 1,000 births)	63	77	52	39	30
Under-five mortality rate (per 1,000 births)	95	115	74	52	35
Maternal mortality rate (per 100,000 births)	500	488	520	362	150

Source: KNBS et al., 2015

Between 2012 and 2016, pneumonia was the leading cause of death in Kenya. Pneumonia, together with malaria, cancer, and HIV, accounted for nearly one-third of all reported deaths

during that time. Other causes among the top 10 major causes of death included tuberculosis (TB), anaemia, traffic accidents, other accidents, heart disease, and meningitis. The number of deaths attributed to malaria, pneumonia, and HIV declined between 2010 and 2016 (KNBS, 2017).

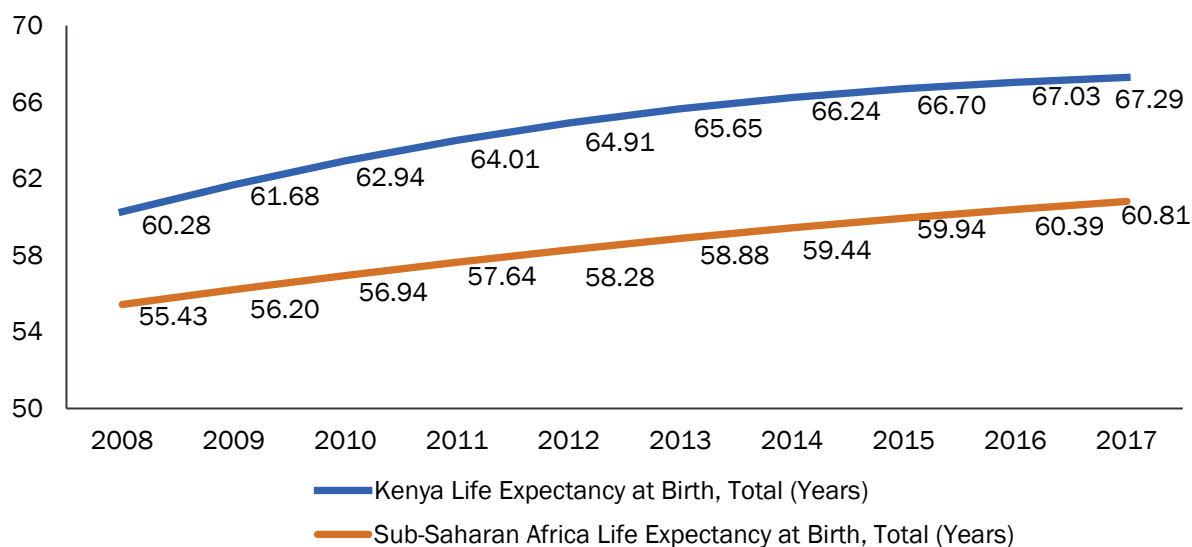
**Figure 1.3. Top Causes of Mortality and Morbidity in Kenya, 2010–2016**



Source: KNBS Economic Survey (various surveys)

While Kenya has made tremendous progress in combating infectious diseases such as HIV, it is now grappling with an epidemiological transition due to an increase in noncommunicable diseases (NCDs). While the burden resulting from noncommunicable conditions rises, the burden of infectious diseases such as HIV remains high. As a result, Kenya is faced with a double disease burden, which places immense strain on the health system. In addition, the focus of donor funding on specific diseases such as HIV, TB, and malaria reduces the fiscal space available to tackle other diseases and introduces fragmentation. Currently, NCDs account for more than half of hospital admissions and more than 55 percent of hospital deaths in Kenya. Cardiovascular disease is the leading cause of NCD death in the country, accounting for between six and 13 percent of cause-specific deaths among adults, depending on the source. Other significant contributors to NCD morbidity and mortality include cancers, diabetes, and chronic obstructive pulmonary diseases. The NCD burden also includes violence and injuries; haemoglobinopathies; mental disorders; and oral, eye, and dental diseases (MOH, Division of Noncommunicable Diseases et al., 2015). In response to Kenya's rising NCD burden, in 2015 the MOH launched the *Kenya National Strategy for the Prevention and Control of Noncommunicable Diseases, 2015–2020*, which serves as the strategic blueprint for NCD prevention and control at the national and county levels (MOH, 2015).

According to the World Bank's 2017 World Development Indicators, Kenya's life expectancy at birth increased from 60 years in 2008 to 67 years in 2017 (World Bank, 2017a) and is projected to rise to 72 years by 2030 (MOH, 2014). Throughout the 2008–2017 time period, Kenya's life expectancy remained above the sub-Saharan Africa average (see Figure 1.4).

**Figure 1.4. Life Expectancy at Birth (Years), Kenya and Sub-Saharan Africa**

Source: World Bank, 2017a

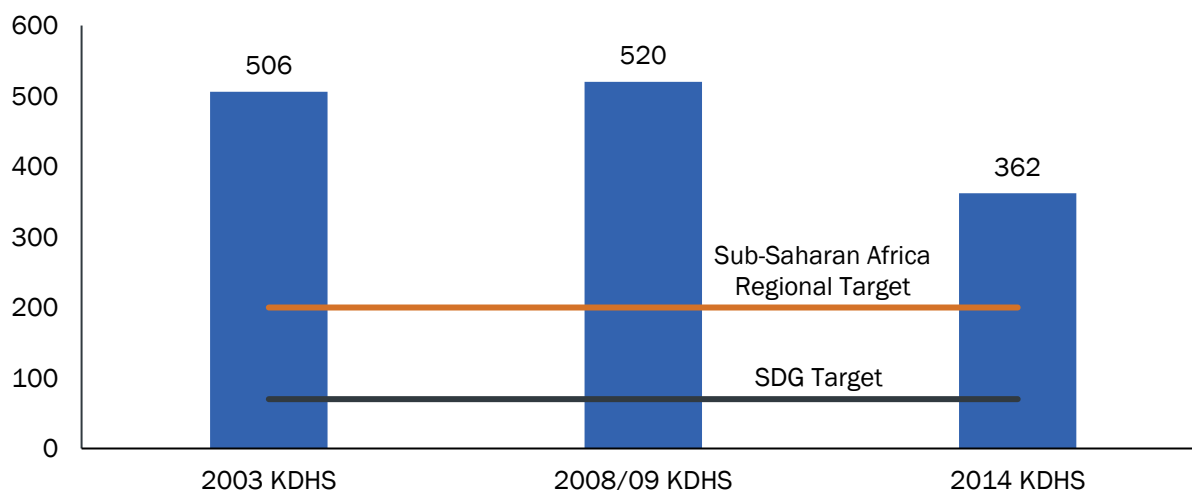
### ***Family planning and reproductive health***

Kenya's contraceptive prevalence rate, an indicator of a country's capacity to provide access to reproductive health services such as family planning, increased from 46 percent in 2008/09 to 58 percent in 2014 (KNBS, 2015). Slightly more than half of currently married women (58 percent) and 65 percent of sexually active unmarried women currently use some method of contraception. Among currently married women, modern methods of contraception are more commonly used (53 percent) than traditional methods (5 percent). Of the modern methods, injectables are the most widely used (26 percent), followed by implants (10 percent) and the pill (8 percent). Rhythm method is the most popular traditional method used (4 percent). Overall, 18 percent of currently married women have an unmet need for family planning (KNBS, 2015).

### ***Maternal mortality***

Maternal mortality is a key indicator of the health status of a population and of the development status of a country. Between 2008/09 and 2014, Kenya's maternal mortality ratio declined from 520 maternal deaths per 100,000 live births (KNBS et al., 2009) to 362 (KNBS et al., 2015). Despite this improvement, Kenya's maternal mortality ratio remains above both regional and SDG targets of 200 maternal deaths per 100,000 live births and 70 maternal deaths per 100,000 live births, respectively. Module 4 of this assessment (Service Delivery) includes details on utilization of antenatal care (ANC) services and births attended by a skilled provider.

Figure 1.5. Maternal Mortality Rate, per 100,000 Live Births (Kenya)

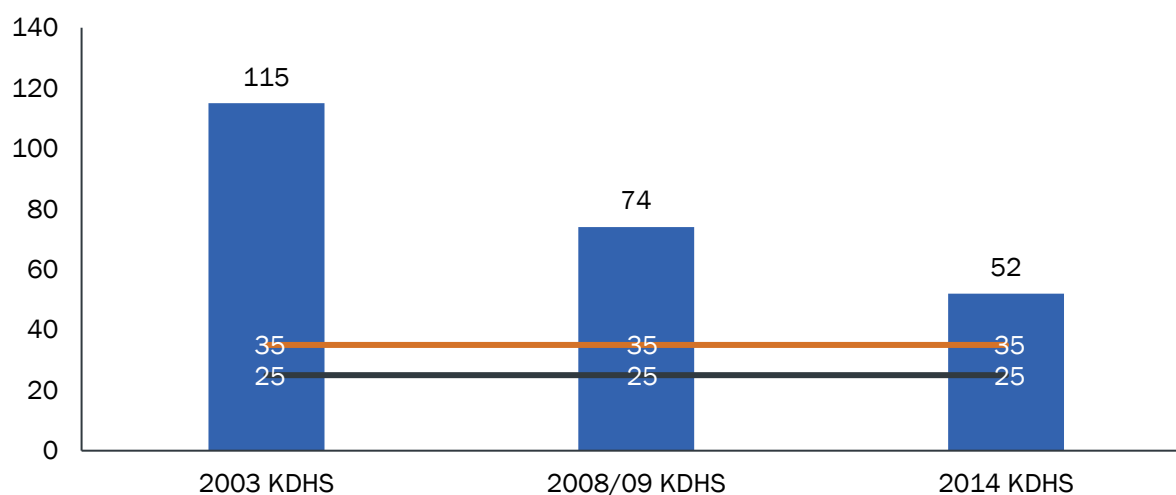


Sources: KNBS et al., 2009; KNBS et al., 2015

### Child health

Kenya's under-five mortality ratio is 52 deaths per 1,000 live births, meaning one in every 19 children does not survive to his or her fifth birthday. The infant mortality ratio is 39 per 1,000 live births (KNBS et al., 2015). Although under-five mortality has declined substantially since the 2003 KDHS (115/1,000) (Central Bureau of Statistics et al., 2004), it remains above the national target of 35/1,000 set by KHSSP IV (MOH, 2016) and Kenya's SDG target (25/1,000). Factors that may be contributing to the decline in childhood mortality include improved utilization of maternal health services such as deliveries in a facility, deliveries by skilled attendants, and uptake of postnatal care services for mothers and newborns. The Government of Kenya continues to undertake various interventions to reduce rates of maternal and childhood mortality. These include KHSSP IV targets and implementation of the "Linda Mama" (Protecting Mothers) program.

Figure 1.6. Under-five Mortality Rate, per 1,000 Live Births (Kenya)



Source: KNBS et al., 2015

## Nutrition

Malnutrition places children at increased risk of morbidity and mortality and has also been linked to impaired mental development. About one-quarter (26 percent) of Kenyan children are stunted, including 8 percent who are severely stunted. Children of mothers with secondary or higher education are less likely to be stunted (17 percent) compared with children whose mothers did not complete primary school (34 percent) or have no education (31 percent). Disparities exist at the county level, with West Pokot and Kitui counties having the highest proportions (46 percent) of stunted children (KNBS, 2015).

## HIV

HIV continues to be a major public health problem in Kenya and is a priority area in the Kenya Vision 2030. Kenya is considered one of the top four HIV “high burden” countries in Africa. The epidemic is deeply rooted among the general population in some regions of the country. At the same time, there is also concentration of very high prevalence among key populations. According to the *2016 Kenya AIDS Progress Response Report*, HIV prevalence among adults 15–49 years of age is 5.9 percent (NACC, 2016). In Kenya, as in most of sub-Saharan Africa, women’s HIV vulnerability is greater than men’s, as demonstrated by higher HIV prevalence rates among women than men (6.3 percent and 5.5 percent, respectively, in 2015). Among young people 15–24 years of age, the odds of being infected by HIV are also higher among young women than young men. Prevalence among young women declined from 5.9 percent in 2003 to 4.5 percent in 2012, while prevalence among young men remained relatively stable (between 1.1 and 1.5 percent) during the same period (NACC, 2015). Kenya’s HIV epidemic is geographically diverse, with county prevalence rates ranging from 0.4 percent in Wajir County to 26 percent in Homabay County. At the end of 2017, there were approximately 1.6 million people living with HIV in Kenya (825,939 women, 693,598 men, and 98,170 children) (NAS COP, 2018).

The HIV incidence rate is 0.35 percent per year. In 2015, there were 71,034 new HIV infections among adults ages 15 years and above and 6,613 new infections among children ages 0–14 years. Key populations (men who have sex with men, prisoners, sex workers and their clients, and people who inject drugs) account for one-third of all new HIV infections in Kenya. HIV accounts for approximately 20 percent of maternal deaths and 15 percent of deaths in children under five years of age (NACC, 2015).

Coverage of HIV testing services rose significantly between 2008/09 and 2014. In 2008/09, 58 percent of women and 42 percent of men ages 15–49 years had ever been tested for HIV. In 2014, the percentages had risen to 85 percent and 72 percent, respectively, attributable in part to robust HIV testing services at facility and community levels (KNBS et al., 2015).

To improve HIV treatment coverage, Kenya has adopted WHO’s 2016 *Consolidated Guidelines on the Use of Antiretroviral Drugs for Treating and Preventing HIV Infection*, which advocate for “test and treat” and aims to have 90 percent of people living with HIV on antiretroviral therapy (ART) by 2019 (WHO, 2016). The number of people on ART rose from 656,359 in 2013 to 897,644 in 2015 and 1,040,000 in 2017. The number of treatment sites has increased by over 1,000 to support scale-up of HIV treatment (NACC, 2016).

Treatment coverage for sexually transmitted disease (STD) among individuals 15–64 years of age was 70.5 percent, as reported in the 2012 Kenya AIDS Indicator Survey (KAIS). Treatment coverage was significantly higher among women (91.0 percent) than men (53.6 percent).



High levels of stigma and discrimination have been shown to affect demand for and utilization of HIV-related services (NACC, 2016).

The HIV epidemic has negatively affected Kenya's economy, lowering the country's per capita output by 4.1 percent (NACC, 2016). Table 1.4 provides an overview of some key HIV indicators in Kenya and sub-Saharan Africa.

**Table 1.4. HIV Estimates, Kenya and Sub-Saharan Africa**

Indicators	Kenya	Sub-Saharan Africa
People living with HIV (million)	1.5	24.7
Adult (15–49 years) prevalence rate (%)	5.9%	4.8%
Children (0–14 years) living with HIV	98,170	2.9 million
Youth (15–24 years) living with HIV	268, 586	2.9 million
Annual adult deaths attributable to HIV (%)	29%	-
Under-five deaths attributable to HIV (%)	14%	-

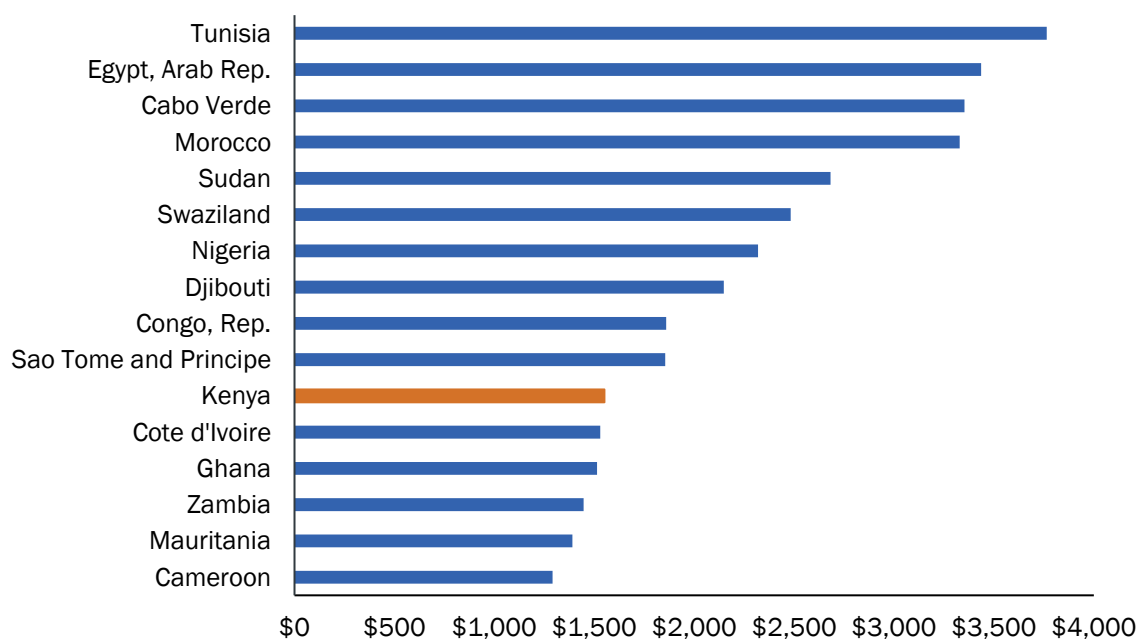
Source: NACC, 2016

### ***Economic environment***

In 2016, Kenya's per capita gross domestic product (GDP) was \$1,551, well below the average for lower middle-income African countries (\$2,247) and among the lowest recorded among these countries. In 2016, Cameroon had the lowest GDP per capita (\$1,291) in this group, while Tunisia had the highest (\$3,764) (see Figure 1.7). However, Kenya's strong GDP growth offers potential opportunities for mobilizing additional domestic resources for health. GDP growth generates increased government revenues, part of which can be allocated to health. Moreover, rising incomes enhance the capacity of individuals and households to purchase health insurance.

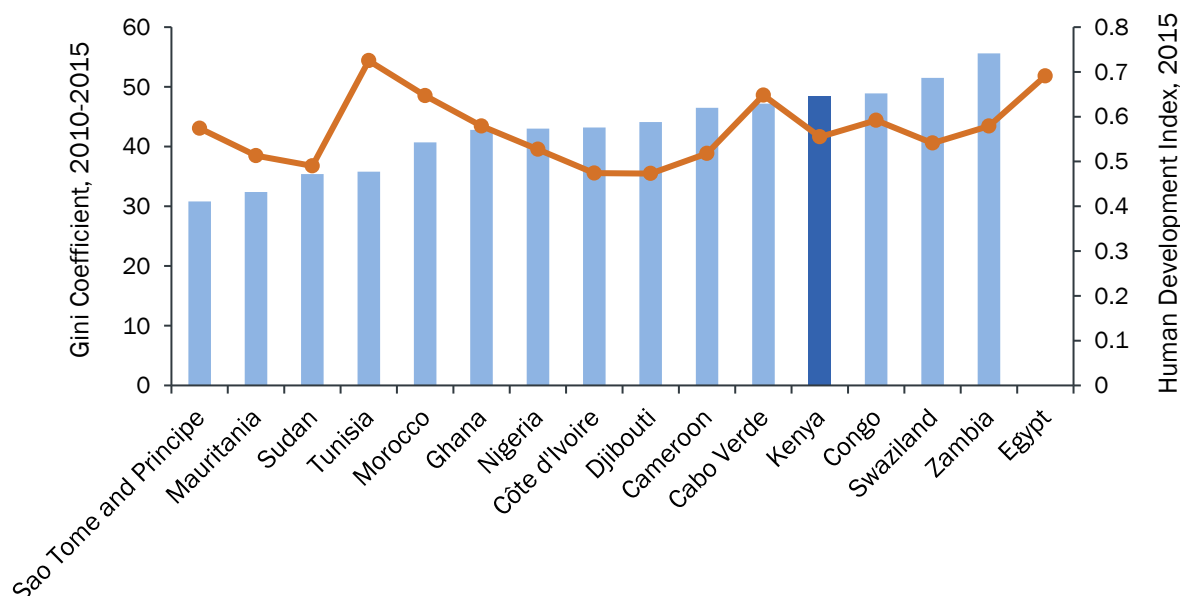
Between 2013 and 2016, uncertainty due to the general election held in March 2013, rising incidents of insecurity, and insufficient rains negatively impacted Kenya's economic growth (see Figure 1.8). On the demand side, growth was mainly driven by an increase in private final consumption and rapid growth in capital investment. On the supply side, major drivers of the economy were agriculture, forestry, and fishing; construction; wholesale and retail trade; education; and finance and insurance. Kenya's GDP expanded by 5.7 percent in 2015 due to significant growth in key sectors, including agriculture, construction, real estate, and finance and insurance. However, growth decelerated in mining and quarrying, information and communication, and wholesale and retail trade. In 2016, Kenya's real GDP grew by an estimated 5.8 percent, with the accommodation and food services sectors recording improved growth. Other sectors that registered significant improved performance in economic activities were the information and communication, real estate, and transport and storage sectors. Persistent drought hampered growth in the fourth quarter of 2016, negatively impacting agriculture and electricity supply (KNBS, 2018).

Figure 1.7. GDP per Capita, Lower Middle-Income African Countries, 2016



Source: UNECA, 2017

Figure 1.8. Income Distribution and Inequality in Lower Middle-Income African Countries

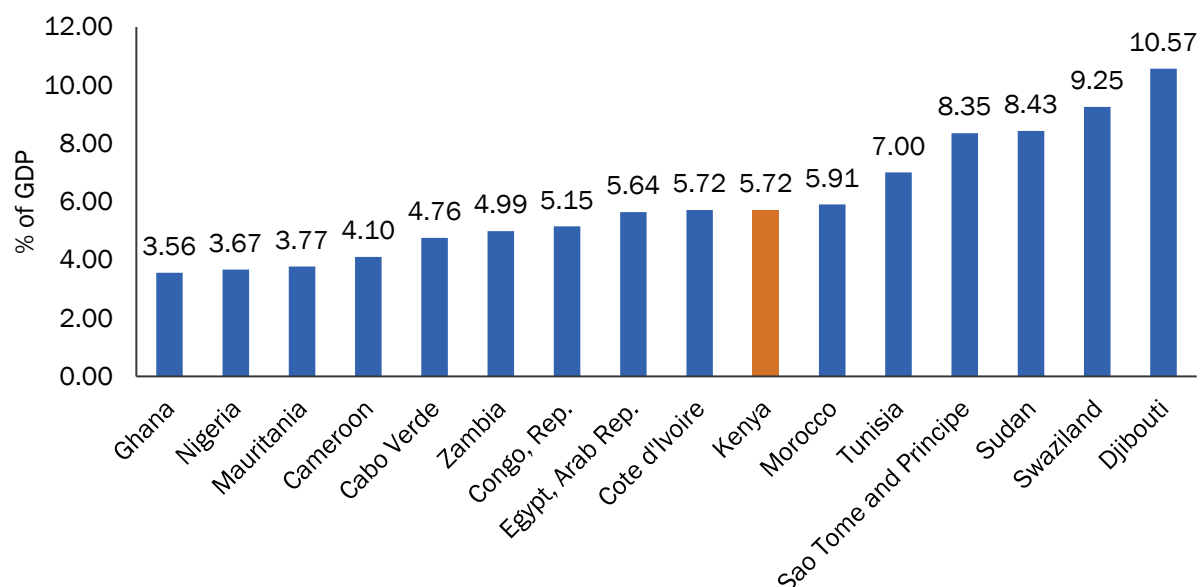


Source: UNDP, 2016

Economic inequality in Kenya is greater than average for lower middle-income countries in Africa. The Gini coefficient measures deviation of income distribution among individuals or households within a country from perfectly equal (0) to absolute inequality (100). In 2015, lower middle-income countries in Africa had an average Gini coefficient of 43.09, while Kenya’s Gini coefficient was 48.5. In 2016, Kenya was ranked 146th out of 188 countries according to the United Nations Development Programme’s (UNDP) Human Development Index, placing Kenya second to last in the “medium development” cohort. The index is an average measure of human development achievements, particularly across three dimensions: a long and healthy life, access to knowledge, and a decent standard of living (UNDP, 2016).

In 2014, Kenya's total health spending was 5.72 percent of GDP, placing it towards the middle of lower middle-income African countries (see Figure 1.9, although below the average for the group (6.04 percent). Djibouti recorded the highest health expenditure as a percentage of GDP (10.57 percent), while Ghana recorded the lowest (3.56 percent).

**Figure 1.9. Total Health Expenditure as a Percentage of GDP, Lower Middle-Income African Countries, 2014**



Source: World Bank, 2017a

### *Business Environment and Investment Climate*

In 2017, Kenya ranked 80th globally on the World Bank's ease of doing business index and was highlighted as one of 10 countries making the biggest improvements in their business regulations worldwide, and as the third most reformed country in sub-Saharan Africa (World Bank, 2017b). The doing business index assigns scores of 1–190 reflecting the ease of doing business in a particular country across different domains. The higher a country's ranking (higher rankings correspond with lower numerical values) the more conducive that country's regulatory environment is to starting and operating a business.

Over the last three years, Kenya's ranking on the index improved, reflecting the government's intentional efforts to create a positive business environment. Notably, in the past year Kenya implemented the most reforms in the region. Among other improvements, Kenya made starting a business easier by reducing the number of procedures required to register a business and introduced a single-window system to reduce the time required for documentary compliance.

**Table 1.5. Ease of Doing Business in Kenya, 2010–2016**

	2010	2011	2012	2013	2014	2015	2016	2017
Global Rank	106	109	122	129	129	113	92	80

Source: World Bank, 2017b

## **Political environment**

### **Politics**

In 2010, Kenyans adopted a new constitution (ROK, 2010), which radically changed the governance architecture of the country, significantly altering its political environment. Devolution remains the centerpiece of this new constitution. A range of political, administrative, and financial functions have been delegated to 47 semi-autonomous counties that were established after the 2013 elections. Yet, Kenya maintains a unitary system of government that requires national and county governments to cooperate with one another in accordance with the Intergovernmental Relations Act of 2012. The structure of the key arms of government (executive, judiciary, and parliament) have changed since the last has. Key changes include the following:

1. Creation of the Presidency, which consists of a President and a Deputy, who are jointly elected. This stands in contrast to the previous system, under which only the president was elected by voters (ROK, 2010, Chapter 9)
2. Establishment of a bicameral Parliament, with each chamber having a distinct role (Previously, Parliament was unicameral):
  - a) A National Assembly consisting of 290 elected members, including 47 elected women representatives, is responsible for passing national-level laws (ROK, 2010, Art 96, 98)
  - b) The Senate consisting of 16 nominated women members, 2 members representing the youth, 2 members representing persons with disabilities, 1 speaker. The Senate oversees the passing of county level legislation. (ROK, 2010, Art 94, 97)

Establishment of superior courts (ROK, 2010, Art 162), including the creation of a supreme court in addition to the high court and court of appeal.

Establishment of commissions and independent offices such as the Commission on Revenue Allocation, the Salaries and Remuneration Commission, the Land Commission, the Police Service Commission, and the Office of the Auditor General and Controller of Budget (ROK, 2010, Chapter 15). These commissions promote separation of power, promote independence.

3. Inclusion of a Bill of Rights under the 2010 constitution, which has altered Kenya's political landscape by providing more civic space (ROK, 2010, Art 1 ,2); expanding fundamental rights and freedoms such as rights to health, housing, information, etc. (ROK, 2010, Chapter 4); and providing an elaborate framework on the conduct of state officers to promote integrity in leadership (ROK, 2010, Chapter 6).

The Fourth Schedule of the Kenya Constitution defines the functions assigned to the two levels of governments as follows:

The **national government** is responsible for leadership of health policy development; management of national referral health facilities; capacity building and technical assistance for counties; and the development of norms, standards and guidelines.

**County governments** are responsible for county health services, including county health facilities and pharmacies; ambulance services; and the promotion of primary healthcare.

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## 2. Governance

*Leadership and governance involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability (WHO, 2007, p. vi)*

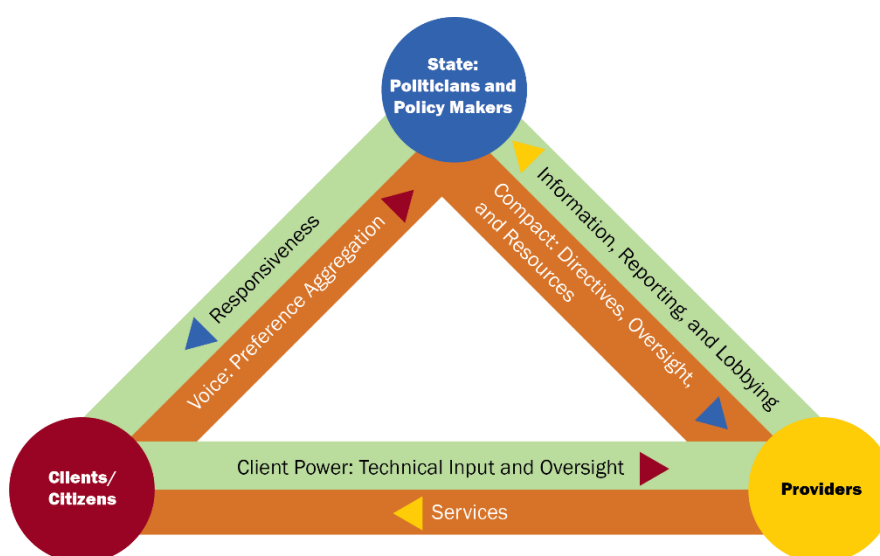
### Introduction

#### Overview of governance

Increasingly, governance is recognized as a significant factor affecting health system performance (Brinkerhoff and Bossert, 2013). Good governance involves “directing health system resources, performance, and stakeholder participation toward the goal of saving lives, and doing so in ways that are open, transparent, accountable, equitable, and responsive to the needs of the people” (Tarantino et al., 2016, p.3). Health system governance cannot be well understood without taking into account the overall governance environment within which the health system operates. The 2017 Kenya HSA uses the health governance framework shown in Figure 2.1 (Brinkerhoff and Bossert, 2008) to analyze and understand how relationships and linkages among state actors, providers, and citizens work to strengthen Kenya’s health system by making it more responsive to the needs of Kenyan citizens.

State actors (e.g., politicians, policy-makers, and other government officials) are responsible for developing, implementing, and enforcing the rules and regulations that guide the health system. The framework shows how state actors rely on inputs from providers and citizens to carry out this function effectively. Ideally, state actors take citizens’ needs and preferences into account when developing programs, policies, and financing (see section 2.6). Providers are the staff, facilities, and organizations (private, public, and not-for-profit) that support health service provision. Providers deliver services to clients/citizens and information to state actors, who use it to develop and implement policy guidance, norms, standards, oversight, and resources to facilitate service delivery. The bottom of the pyramid illustrates how clients/citizens (either as individuals or collectively) communicate their preferences and needs to providers, who respond by offering services to meet these preferences and needs.

Figure 2.1. The Health Governance Framework



Source: Brinkerhoff and Bossert, 2008

## Changes in governance structures

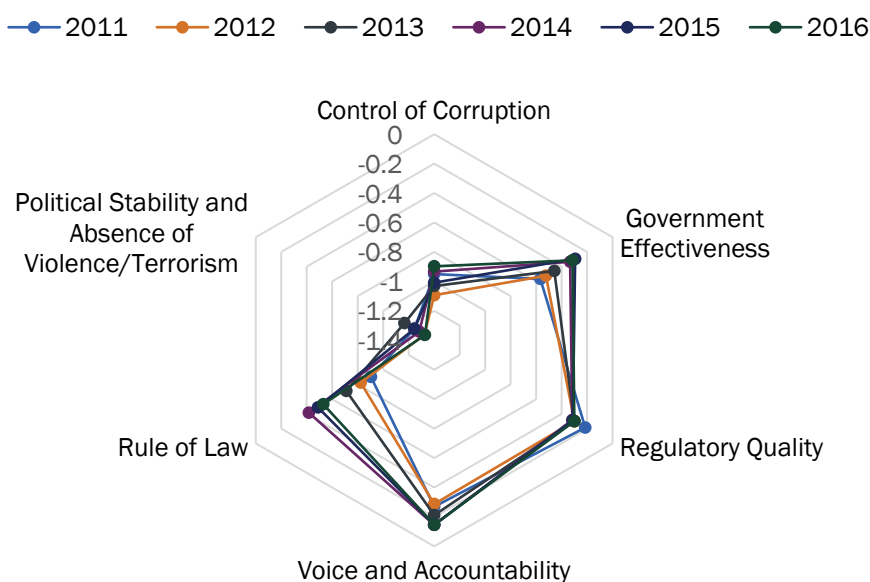
Kenya's governance architecture radically changed with the adoption of the 2010 constitution (ROK, 2010). Although the post-election violence of 2008 provided the catalyst required to speed up these reforms, Kenyans had long been clamoring for change in the way the country was being governed. The new reforms sought to correct poor governance practices such as arbitrary policy making; unaccountable bureaucracies; abuse of executive power; a suppressed and unengaged citizenry; rampant corruption; irregular, inequitable, and unjust allocation of resources; and patronage.

Good governance practices anchored in the 2010 constitution include separation of powers; devolution; promotion of public participation in planning, budgeting, and policy making; promotion of integrity in leadership; a robust bill of rights; promotion of national values; and inclusion of marginalized populations. These practices have helped define processes for managing public resources; the types of institutions necessary to enhance governance; levels of accountability for public officials; and mechanisms for policy development and implementation.

## Key governance indicators

Kenya's ranking according to the World Bank's World Governance Indicators for the 2011–2016 period show that the country continues to grapple with political instability and corruption. While there have been improvements in government effectiveness and voice and accountability, the quality of the regulatory system and the rule of law have gradually declined. Political stability remains a key concern in Kenya, as demonstrated by the post-election violence that broke out in response to contested presidential elections in 2013 and 2017.

Figure 2.2. Governance Performance, 2011–2016



Source: World Bank, 2017

A governance assessment conducted in 2016 (Ebole and Odhiambo, 2016) evaluated Kenya's performance across four domains: civic space, security and human rights, rule of law and



independence of the judiciary, and corruption and accountability. Table 2.1 provides a summary of the assessment's findings.

**Table 2.1. Summary of Key Findings from the Kenya Governance Assessment**

Civic Space	Rule of Law and Independence of the Judiciary
Civil society organizations play an active role in safeguarding media, social, and individual rights. However, these organizations have also generated significant tension and conflict with the government.	Kenya's judiciary has made significant progress toward greater independence and has become more efficient and effective in the discharge of its duties.
Security and Human Rights	Corruption and Accountability
There continue to be reports of persistent abuses and hostility by the security forces (mostly the police) targeting civilians. Key institutions working to address rights abuse issues include the Independent Policing Oversight Authority and the Kenya National Commission on Human Rights. However, these institutions lack the prosecutorial powers necessary to be more effective.	This area remains a continuous struggle for Kenya, as demonstrated by persistent cases of misallocation of funds and embezzlement.

Source: Ebole and Odhiambo, 2016

## Governance Structures

Devolution of power, the centerpiece of Kenya's 2010 constitution, has changed the health sector's governance structures (ROK, 2010, Art 6, Art 12, Art 174). The 2010 constitution assigned responsibility for policy, oversight of referral hospitals, and capacity building to the national level, and assigned responsibility for service delivery to county governments. Since the establishment of county governments following the 2013 elections, both national and county governments have changed their organizational structures to align with their newly assigned functions. The distinct roles of the national and county governments are listed in the Fourth Schedule of the 2010 Constitution (ROK, 2010).

### *National level*

At national level, the MOH provides overall leadership and regulatory and policy guidance to support counties in health service delivery and ensure the overall functioning of the health system. Following the 2013 elections, to align with new constitutional requirements for a lean government, the two former health ministries (Medical Services and Public Health) were merged to create a single MOH.

At national level, the senior health sector management is responsible for oversight of the entire policy process, from agenda setting to evaluation. This management is made up of the Cabinet Secretary for Health; the Principal Secretary for Health; the Director General for Health; and the heads of the semi-autonomous government agencies (SAGAs), which include Kenyatta National Hospital, Moi Teaching and Referral Hospital, Kenya Medical Training College, the Kenya Medical Supplies Authority (KEMSA), and the Kenya Medical Research Institute (KEMRI). Under the new constitution, cabinet secretaries are expected to remain apolitical in the discharge of their functions. In the past, in addition to carrying out their health sector management functions, ministers of health have played significant political

roles in support of ruling governments. The Cabinet Secretary is supported by a team comprising the Principal Secretary, Director of Medical Services, heads of directorates, heads of all sector departments, including those in SAGAs, and heads of units. Each directorate is made up of departments, aligned with the health agenda as outlined in Kenya’s health policy objectives. Despite clarity on key positions, such as the directors, the MOH organogram has changed several times during the past four years. These frequent organizational changes pose challenges related to accountability, communication, and coordination with stakeholders.

### **County level**

The leadership structure at the county level mirrors that of the national MOH and is guided by the *County Governments Act No. 17 of 2012* (ROK, 2012a). The county executive committee member responsible for health is a political appointee nominated by the Governor and vetted by the County Assembly. This committee member is responsible for overall policy and leadership of the sector at county level. The Chief Officer for Health, who provides financial oversight for the sector, is recruited by the County Public Service Board and appointed by the Governor in accordance with the *County Governments Act* (ROK, 2012a, Art 35, Art 45). The County Director of Health, now entrenched in the *Health Act* (ROK, 2017), provides guidance to the county health management team, which is composed of the heads of directorates. Assessment interviews revealed that, since their establishment in 2013, counties have generally lacked clear, functional, and uniform management structures to support service delivery. For example, some counties have split their health departments into different directorates, potentially reintroducing the inefficiencies present between 2008 and 2013, when there two separate national health ministries. Although structures vary from county to county, common directorates established across the country include curative services, preventive services, and administration. The MOH attempted to develop a prototype structure to address this gap. However, this prototype has not been disseminated. Even if the prototype is disseminated, there is a risk that few counties will follow its recommendations, as the MOH lacks authority to mandate management structures at the county level.

### **Health Sector Intergovernmental Forum**

The Health Sector Intergovernmental Forum (HSIF) was established in 2013 to foster cooperation between national and county governments. This forum plays an important role in coordinating policy dialogue and disseminating health policies. It is also a good platform for encouraging county governments to adopt and implement health sector priorities. Overall leadership and oversight for the HSIF is provided by the MOH’s Department of Health Sector Coordination and Intergovernmental Affairs (DHSCIA). Since its establishment in 2013, the HSIF has helped resolve devolution transition challenges such as the transfer of HRH files from the national government to county governments. The HSIF also helped broker an agreement for centralized procurement of essential medicines and medical supplies through KEMSA. However, the HSIF has encountered challenges that impact its effectiveness. Over the last three years, HSIF meetings have been devoid of clear agendas and follow-up on agreed items has been minimal. These challenges have made participation in the forum less attractive, as shown by declining attendance at HSIF meetings. In addition, HSIF meetings are largely dependent on financial support from partners. Further, the DHSCIA is not prioritized in MOH budget allocation, leaving it without the resources necessary to fully execute its mandate. Finally, the HSIF has been at the center of significant political tension, especially during devolution’s early stages, when counties were seeking to establish their newfound “independence” and the national

government was struggling to cede power that it had held for many years. Department staff have been unsure of how to navigate these new political complexities. Building the capacity of department staff in managing the politics of the policy process could go a long way toward improving the department's effectiveness.

## Legal and Regulatory Environment

### ***Public Health Act, Cap 242 (1986, Revised 2012)***

Historically, the *Public Health Act, Cap 242* (ROK, 1948), originally enacted in 1948 and last revised in 2012 (ROK, 2012a), has been the anchor for health sector laws in Kenya. The act has provided guidance on issues such as administration, notification and control of infectious diseases, special provisions regarding epidemics, sanitation, housing, food handling, and other related issues. The Public Health Act was augmented by various other legislative measures establishing regulatory bodies (see “Regulatory bodies” below) and SAGAs. This gave rise to challenges related to fragmentation, inconsistencies, and poor linkages among various laws affecting the health sector. In addition, there was a need to review existing legislation to cope with evolving challenges in the health sector.

### ***Health Act No. 21 (2017)***

In June 2017, parliament passed a new health law, *Health Act No.21 of 2017* (ROK, 2017). The measure brought the scattered pieces of health legislation together under one unified framework. The new law, which is more intentional, establishes a rights-based approach to health, clarifies the roles of national and county governments, creates new regulatory bodies (see “Regulatory bodies” below), and provides guidance on issues such as health financing and private sector participation.

Since 2013, counties have also enacted their own pieces of legislation, largely related to health financing. For example, Kwale County enacted a community health and county referral law to address a bottleneck in funding flows that was resulting in hospitals receiving funds from the central County Revenue Account (CRA) late or in diminished amounts, negatively affecting service delivery. The new measure allows health facilities to retain and spend the funds they collect. Developing laws is new terrain for county governments and assessment interviews revealed that counties are facing challenges in drafting health laws due to health departments' lack of capacity in this area.

### ***Proposed legislation***

Several additional pieces of legislation have been proposed to address service delivery gaps and bring the health sector's legal framework into alignment with the structures and functions of devolved government (see Table 2.2). These proposals date back as far as 2012, an indication of how long it can take for proposed legislation to be approved by parliament. The proposals are at different stages of the legislative process for various reasons, including lack of political will to push them through to the approval stage.

**Table 2.2. Proposed Legislation**

Proposed Legislation	Purpose
Kenya Medical Supplies Authority Amendment Bill, 2013	To amend the Kenya Medical Supplies Authority Act of 2013 to bring the act into alignment with the functions of devolved government
Pharmacy and Poisons (Amendment Bill), 2014	To make necessary changes to the Pharmacy and Poisons Act by, among other things, transforming the Pharmacy and Poisons Board into an effective semi-autonomous entity
Diabetes Management Bill, 2014	To provide a legal framework for prevention, treatment, and control of diabetes
Physiotherapist Bill, 2013	To establish a legislative framework for the training, registration, and licensing of physiotherapists
Mental Health Care Bill, 2012	To provide for the care, treatment, and rehabilitation of individuals with mental illnesses
Kenya National AIDS Authority Bill, 2014	To provide a legal framework for establishing the National AIDS Authority as a successor to the National AIDS Control Council to align with Kenya's devolved system of governance by allowing county-level participation on the board

Source: Council of Governors, Kenya and UNDP, 2015

### **Regulatory bodies**

Unlike other sectors, the health sector lacks single regulatory body, relying instead on several regulatory bodies to perform what would be the role of a single regulator. Together, these regulatory bodies are responsible for improving and ensuring compliance with standards and technical requirements for institutions and health professionals, which they accomplish through inspection, issuance of licenses, certification, and quality assurance. Table 2.3 provides an overview of health sector regulatory bodies. The Health Act of 2017 establishes the Kenya health professions oversight authority to reduce duplication and enhance coordination.

**Table 2.3. Health Sector Regulatory Bodies**

Regulatory Body	Function
The Clinical Officers Council—established under the Clinical Officers (Training, Registration, and Licensing) Act, Cap 260, 1988	Responsible for assessing the qualifications of, registering, and licensing clinical officers, as well as using supervision to monitor, improve, and ensure the professional conduct of these officers.
The Nursing Council of Kenya—established under the <i>Nursing Council Act 257</i> , 1983	Establishes, improves standards for, and safeguards all branches of the nursing profession and healthcare within the community; advises the Minister on matters concerning all aspects of nursing.
The Medical Laboratory Technicians and Technologists Board—established under the <i>Medical Laboratory Technicians and Technologists Board Act No. 10</i> , 1999	Provides supervision and control over the training, business, licensing, practice, and employment of laboratory technicians and technologists; advises the Government on all related matters.

Regulatory Body	Function
The Nutrition Council of Kenya—established under the <i>Nutrition and Dieticians Act, 2007</i>	Determines, sets, and enforces a framework for the professional practice, ethics, and quality assurance of nutritionists and dieticians, as well as the institutions approved to provide training, professional development, and public information for these professions.
The Medical Practitioners and Dentists Board—established under the <i>Medical Practitioners and Dentist Act, Cap 253, 1978</i>	Responsible for supervising institutions offering a course in medicine or dentistry, as well as monitoring relevant standards; has the authority to cancel or suspend any award from a noncompliant institution.
The Radiation Protection Board—established under the <i>Radiation Protection Act, Cap 243, 1985</i>	Advises the Minister on matters relating to radiation protection and radioactive waste disposal; responsible for enforcing the provisions of this Act and regulations on the owners/premises licensed to dispose of radioactive waste.

Source: ROK, 2017

A 2004 review of the regulatory framework for private healthcare services (Muthaka, D.I et al., 2004) identified two main challenges: weak enforcement of health laws and a lack of clear laws to protect citizens. The consequences of these regulatory shortcomings include the following:

- An upsurge in unregistered health facilities run by unqualified staff
- Unchecked cases of medical malpractice and negligence
- Corruption, which has hampered health facility inspections
- Partial enforcement of regulations
- Poor health service delivery equipment and inappropriate technologies

Stakeholders interviewed by the HSA team felt that, although adequate regulations exist, enforcement is weak and regulations are often violated, as the penalties for doing so are not punitive enough to deter offenders.

In theory, professional bodies exist to enhance the performance of the professions they serve. However, Kenya's health sector professional bodies (the Medical Practitioners and Dentist Board, Clinical Officers Council, Kenya Medical Laboratory Technicians and Technologists Board, Nursing Council of Kenya, and Pharmacy and Poisons Board), have not yet fully realized this objective. Some of the stakeholders interviewed questioned the added value of these professional bodies. For example, one interviewee expressed the opinion that the health sector framework is poorly coordinated among the sector's professional bodies, with fee collection serving as the biggest incentive for these bodies' existence. Another respondent questioned why the Clinical Officers Council demands 500,000 Kenyan shillings (KSh) to accredit a facility to offer clinical officer trainings.

The Health Act of 2017 created additional regulatory bodies to address past implementation gaps related to coordination and a lack of clear guidance in some service delivery domains. These bodies are described in Table 2.4.

Table 2.4. Proposed Health Sector Regulatory Bodies

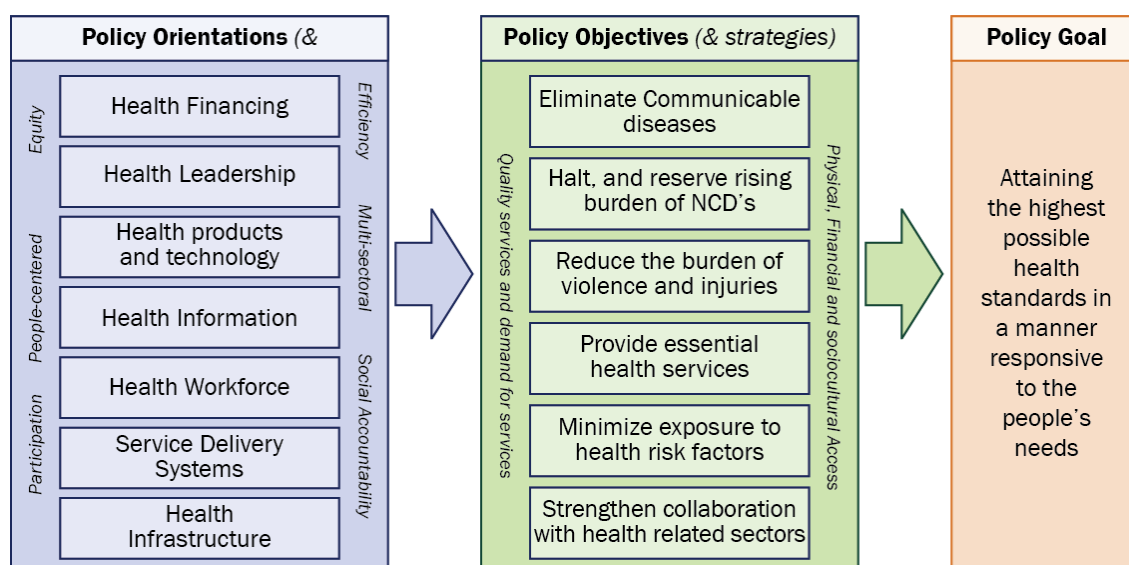
Regulatory Body	Function
Health Professions Oversight Authority	<ul style="list-style-type: none"> <li>Promote and regulate inter-professional liaison between statutory regulatory bodies, including joint inspections</li> <li>Receive and facilitate the resolution of complaints from patients, aggrieved parties, and regulatory bodies</li> <li>Monitor regulatory bodies' execution of their respective mandates and functions</li> <li>Ensure the necessary standards for health professionals are not compromised by the regulatory bodies</li> </ul>
Health Products and Technologies Regulatory Body	<ul style="list-style-type: none"> <li>License the manufacture of and conduct laboratory testing, distribution, and storage of health products and technologies</li> <li>Conduct advertising, promotion, and post-marketing surveillance for quality, safety, and disposal of health products and technologies</li> <li>Regulate contractors for medical devices and physical security for products, including radioactive materials and biological products</li> </ul>
Traditional and Alternative Medicine Regulatory Body	<ul style="list-style-type: none"> <li>Set standards, ensure compliance, and facilitate registration and licensing of the practice of traditional and alternative medicine</li> </ul>

Source: ROK, 2017

## Health Sector Policies, Planning, and Implementation

The *Kenya Health Policy, 2014–2030* (MOH, 2014) provides the overall direction on how attain the highest possible standards of health in line with the 2010 constitution, the country's long-term development agenda, Vision 2030, and global commitments such as the Sustainable Development Goals (SDGs). It focuses on six objectives and eight orientations to attain the government's health goals (see Figure 2.3). Although the policy was adopted by parliament on October 12, 2017, it has been used as the basis for health sector planning in Kenya since 2013.

Figure 2.3. Kenya Health Policy Framework



Source: MOH, 2014

The *Fourth Kenya Health Sector Strategic and Investment Plan, 2014–2018* (KHSSP IV) (MOH, 2016) was developed after the March 2013 elections to align with Kenya’s devolved system of governance. The strategic plan provides the medium-term strategic direction for the health sector and is guided by the *Kenya Health Policy, 2014–2030* (MOH, 2014) and the national long-term development agenda, “Vision 2030”. The strategic plan includes the vision, mission, goal, and core functions for the health sector, including policy priorities, strategic objectives, investment areas, implementation framework, and resource requirements for the 2014–2018 period.

At the county level, planning is further guided by various devolution laws, including the *County Governments Act* (ROK, 2012a) and the *Public Finance Management Act* (ROK, 2012c). Each county is now required to develop a county health strategic plan, which draws its priorities from the county integrated development plan—five-year development plans required by law. Counties then develop annual operational plans to implement the health strategic plans in phases.

Once county governments were established in 2013, they were faced with the immediate challenge of developing county integrated plans, health sector strategic plans, and budgets<sup>3</sup> within a short timeframe to trigger the release of funds (as required by the *Public Finance Management Act, 2012*) needed to get county governments operational. Counties interviewed reported difficulties with engaging the wide array of stakeholders required by law, new formats for developing plans, transitioning from line item budgeting to program based budgeting, as well as understanding the budgeting cycle under the *Public Finance Management Act, 2012* (challenges on budgeting are discussed further in module 3 on health financing). Despite these challenges, all 47 counties were able to develop integrated development plans and strategic plans that were informed by the framework provided by the *Kenya Health Policy, 2014–2030*.

In 2016, the MOH conducted a mid-term review of the health sector strategic plan to assess its overall performance (MOH and WHO, 2016). Under leadership and governance, the report highlighted the following wins:

1. Adopted the *Kenya Health Policy, 2014–2030* to provide guidance on development of health sector plans
2. All 47 counties successfully developed county health strategic plans within the first year of their establishment

The mid-term review identified the following key challenges in governance and leadership:

1. Lack of a standard guidance on the development of a county health management organization structure to advance better attention to health priorities and better coordination
2. Lack of a partnership framework to better facilitate and coordinate external support, and promote accountability
3. Lack of a targeted capacity building plan for counties by the MOH

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<sup>3</sup> In accordance with the County Governments Act, 2012.

## Standards

The MOH Department of Quality Assurance, Standards, and Regulation is responsible for guiding the health sector (both public and private) on issues related to service quality. The department develops various norms and standards to facilitate service delivery. Stakeholders interviewed felt that the MOH was effective in the development of minimum service standards but weak in the dissemination of these standards at the county level. Norms and standards have tended to be disease specific (e.g., HIV, TB, malaria, reproductive health). The MOH is now exploring the development of system-specific norms and standards. For example, it has developed draft norms for leadership and governance to provide better guidance for the establishment and operations of critical leadership and governance structures for all levels of the health sector.

At county level, the enforcement of norms and standards in the public sector is done through supportive, integrated supervision by county teams. Respondents pointed out that limited budgets constrain the ability of these teams to support adherence to standards. On most occasions, to enforce standards, county teams are forced to ride along on disease-specific supervision visits funded by partners. Enforcing standards in the private sector is particularly challenging, as the sector is fairly closed to county health officials seeking to enforce standards. Private for-profit providers and faith-based organizations (FBOs) reported that partners also conduct disease-specific supervision and these stakeholders expressed a need for joint supervision by the public sector and partners. At public and FBO facilities, internal supervision is conducted on a monthly basis—although supervision can be conducted weekly if the need arises. Public facilities reported using a checklist (not integrated) for internal supervision, while FBO facilities reported that they have no tool for supervision. The private for-profit facility visited said they do not conduct internal supervision. In the 2016/17, supervisors in the public sector did not receive any training due to financial constraints.

## Voice and Responsiveness, Transparency

This section looks at how citizens articulate (voice) their concerns to the government and how government responds to these concerns. Citizen voices are mainly expressed through public participation forums, civil society organizations, parliamentary health committees, mainstream media, and social media.

Kenya's new governance architecture amplifies citizen voices in governance through rights of expression and information established by the 2010 constitution (see Table 2.5). County governments are required to integrate "citizen voices" into health sector plans and budgets. HSA interviews indicate that county governments have engaged citizens in planning and budgeting in compliance with the requirements of the *Public Finance Management Act, 2012* (Section 201) and section 115 of the *County Governments Act, 2012*. During the interviews, county government officials cited fiscal constraints as a major factor hindering effective response to citizen preferences. The quality or effectiveness of citizen engagement has not yet been well researched or documented. Challenges pointed out in HSA interviews included largely top-down decision making, difficulty accessing documents, and county governments' weak capacity to effectively engage citizens through public forums or by packaging important documents such as budgets in easily understood formats.



**Table 2.5. Rights Articulated in Kenya's 2010 Constitution**

Article	Provisions
1 (1,2)	All sovereign power belongs to the people of Kenya and shall be exercised in accordance with this Constitution. The people may exercise their sovereign power either directly or indirectly or through their democratically
33 (1,a)	Every person has the right to freedom of expression, which includes- the freedom to seek, receive or impart information or ideas
35 (1,a)	Every person has the right of access to information held by the state
36 (1)	Every person has the right to freedom of association which includes the right to form, join or participate in the activities of any kind
43 (1)	Every person has the right to the highest attainable standard of health, which includes the right to healthcare services, including reproductive health
46(1a-d)	Consumers have the right to goods of reasonable quality; to information necessary for them to gain full benefit from goods and services; to the protection of their health, safety, and economic interests, and to compensation for loss or injury arising from defects in goods or services

Source: ROK, 2010

Citizen voices are also heard through the health committees of the bicameral parliament (senate and national assembly). While these committees represent citizen health interests, this assessment was unable to determine what mechanisms the committees use to set agendas that inform debate and decision making. From assessment interviews, it was clear that county assembly health committees were more active than their national counterparts in voicing citizen interests by advocating for increased resources for programs such as HIV, as well as strategic investments such as capital-intensive diagnostic equipment and other health infrastructure. Interviewees pointed out that assemblies have also been reported to safeguard their own interests rather than those of constituents by pushing for irrational health investments—such as opening new health facilities in their localities—to improve their prospects of political success.

Civil society organizations continue to play a critical role in advancing citizen voice and promoting transparency and accountability. A significant number of active civil society organizations remain at national level, largely because these organizations have traditionally sought to have influence at the national level in alignment with the centralized system of governance. Organizations at national level tend to be better funded and more active in advocacy than their counterparts at county level. For example, WACI Health and the Health NGO Network have organized consultations to include the voice of civil society in universal health coverage discussions. Disease-specific organizations, like the Kenya Treatment Access Movement, pressure government to ensure access to antiretroviral drugs, while the National Empowerment Network for People Living with HIV/AIDS in Kenya and Women Fighting for AIDS in Kenya have been vocal in ensuring that the voices of people living with HIV are heard in the policy process.

Health provider unions and organizations have widely different interests. The Kenya Medical Practitioners, Pharmacists, and Dentists Union, for example, has been wary of devolution. They wanted to preserve the ability of health providers to transfer between counties, improve salary and benefit standards, standardize working conditions, and create a national body to oversee employment of providers. In December 2016, doctors went on strike to protest government inaction on many of these demands, only returning to work in March 2017 when

the government agreed to increase salaries and reduce on call demands. On the other hand, the Kenya Medical Women’s Association worked to end the strike by raising the plight of suffering patients and helped catalyze a resolution to the conflict between the doctors and the government. Non-health-specific organization such as the Inter-religious Council of Kenya were also active in drawing attention to patients’ suffering during the doctors’ strike and helping to bring about a resolution.

Though there are numerous county-level service delivery organizations in Kenya, few actively advocate to county governments. Examples of organizations active in advocacy at county level include HAKI Africa and MUHURI (Muslims for Human Rights), which operate along the coast of Kenya, largely advocating for human rights and highlighting historical injustices—such as land rights—that require attention.

Since the establishment of the devolved system of government, the media, both electronic and print, have played a vital role in holding both the national government and county governments accountable for the use of financial resources. Since 2013, several articles, editorials, and investigative pieces have illuminated county health spending and prioritization issues. For example, the Daily Nation has a regular column on devolution-related budget issues. These activities have helped hold county governments accountable by spurring accountability dialogues, reorganizing government, and, in some cases, contributing to the removal of officials who have been identified as misusing public resources. Kenyans have used social media, the use of which has grown tremendously since 2010, to raise accountability issues on platforms such as Facebook and Twitter. Although social media continue to exert greater influence than traditional media platforms, information provided through this medium lacks the scientific rigour necessary to effectively highlight citizens’ health issues.

## Client Power and Services

The *Kenya Health Policy Framework* of 1994 (MOH, 1994) established facility health committees to foster linkages between service providers and the community. These committees are tasked with facilitating decision making related to service delivery, financial oversight management, as well as ensuring that community health priorities are included in facility plans. Facility health committees are the main mechanism used by the health system to enable citizens to communicate concerns about services and providers to respond to issues raised by citizens. Clients can also voice concerns through suggestion boxes that are widely available in facilities. However, these boxes are rarely used for a variety of reasons, including low levels of literacy among community members.

Under the 1994 health policy, health facilities are required to openly display service data such as number of deliveries and morbidity and mortality data. In addition, facility management is required to display income and expenditure data on a monthly basis. Service delivery efficiency data such as client wait times are not available. Concerns about service delivery are channeled through village health committees, which are represented within facility committees. Responses from facilities flow back to the villages in the same manner.

Assessment findings reveal that, while these committees were active before devolution, their ability to meet frequently and discharge their duties has slowed tremendously since the transition to devolved governance. Counties, for various reasons, including finances, have not reoriented or reinvigorated these committees since the transition. Facility committees seem only to have remained active where donor support has been provided for capacity building and financing meetings.

## Key Findings and Recommendations: Governance

	Key Finding	Recommendation
1	Lack of clear, uniform management structures at the county level	Disseminate the proposed county management prototype to counties for further dialogue and adoption.
2	Weak HSIF performance	Prioritize funding to the department of Health Sector Coordination and Intergovernmental Relations and build the capacity of the department's staff to engage with the politics of collaboration.
3	Lack of clarity regarding the functions and value of proposed regulatory institutions in the newly enacted Health Law (2017)	Disseminate the 2017 Health Law to improve health sector understanding of the new law.
4	Weak enforcement of health laws and norms, especially in the private sector	Actively engage the private sector through the partnership framework. Allocate more resources and priorities to supportive supervision.
5	Lack of coordinated capacity building for counties	Improve dialogue at the HSIF to support the coordination of capacity building efforts.
6	Poor coordination and accountability among professional bodies	Establish a mechanism to bring all regulatory bodies into one policy dialogue space.
7	Weak public decision-making capacity in public participation fora	Improve access to relevant budget documents in a timely manner and simplify budget documents to make them easier for public participants to understand. Build county governments' capacity in how to effectively engage citizens and integrate citizen feedback into the decision-making process.
9	Low availability of health-related advocacy civil society organizations	Build the capacity of existing county-level civil society organizations to advocate for health.
10	Limited capacity to develop appropriate health laws	Build county-level capacity to develop necessary health laws.

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### 3. Health Financing

#### Introduction

As discussed in the previous module (Module 2: Governance), the governance architecture for the Kenyan health system fundamentally changed with the adoption of the 2010 Constitution (ROK, 2010) and the onset of devolution. The devolved system has dramatically changed the way health services in Kenya are delivered and financed. Counties now have considerable autonomy over how they finance primary and secondary healthcare. At the same time, the Government of Kenya has committed to achieving universal health coverage (UHC) and followed up on this commitment by drafting the *Kenya Health Financing Strategy* (MOH, Forthcoming a), which aims to align key features of the health financing system with UHC objectives—ensuring access to quality health services without financial hardship. The strategy, which remains in development, aims to address key health financing weaknesses through proposed reforms focused on resource mobilization, financial risk pooling, purchasing mechanisms, quality assurance, and regulatory frameworks.

Kenya has set ambitious targets for improving health outcomes and advancing UHC, including financial protection. The health financing system will be instrumental in achieving these goals. The current macroeconomic context (see Economic Environment on p.9) suggests that Kenya will have the opportunity to invest more public resources in health. Yet, this opportunity will not necessarily translate into more money for health or advance UHC without concerted efforts by the government to effectively pool and target resources.

**Table 3.1. Snapshot of Key Health Financing Indicators, Kenya**

Indicator	Amount
Total health expenditure per capita (MOH, forthcoming b)	\$78.6
Public per capita health spending (USD)	\$27
Public spending on health as % of GDP	2.5%
Out-of-pocket as a % of total health expenditure (MOH, Forthcoming b)	27.7%
% of population incurring catastrophic health expenditures	6.21%
% of population covered by prepayment and risk pooling schemes (Ministry of Health, 2013)	17%

Source: MOH, Forthcoming a; MOH, Forthcoming b

The *Health Financing Strategy* identifies the NHIF as playing a central role in advancing UHC in Kenya. Currently, less than one-fifth (17 percent) of Kenyans are covered by some form of pre-payment scheme, leaving them vulnerable to out-of-pocket (OOP) expenditures (see Table 3.1.). Further, progress in key health outcomes has been variable, with significant disparities across wealth quintiles and geographies. Ongoing reforms are intended to expand NHIF coverage, with particular attention to enrolling informal sector workers and the poor, who have been difficult to reach in the past.

This module assesses Kenya’s health financing system in light of devolution, ongoing reforms, and the government’s commitment to UHC, including the central role the NHIF is expected to play. It assesses the system in terms of three key health financing functions—resource mobilization, pooling, and purchasing—and discusses the implications of performance across these three functions for financial protection, a key component of UHC.

## Resource Mobilization

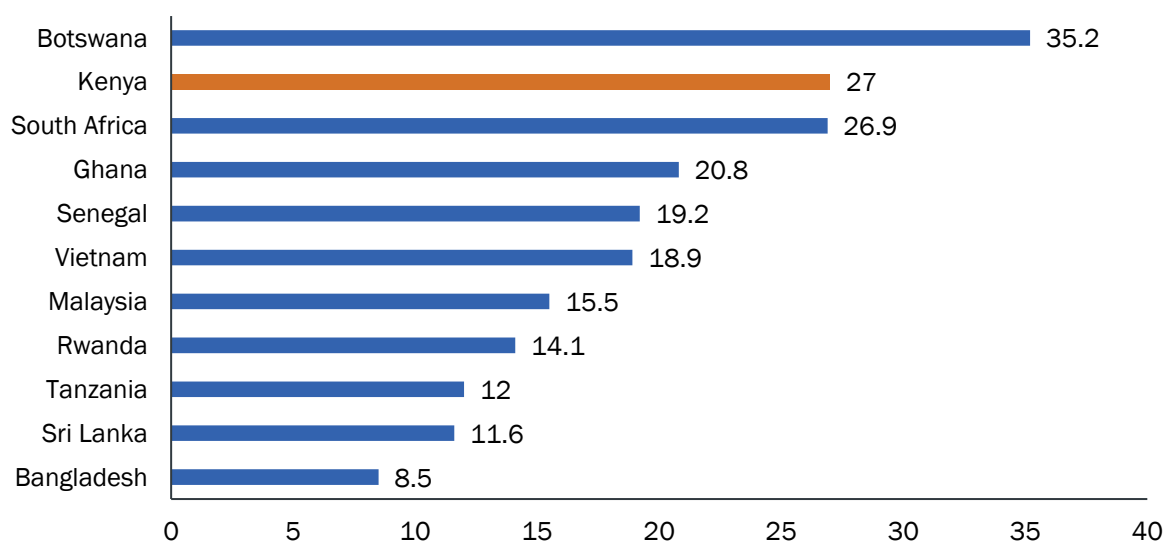
Resources for health in Kenya come from three main sources: the government; external partners; and the private sector, primarily through household spending. As noted above, health spending is still dominated by OOP and external resources. Public resources for health have been increasing but have not sufficiently reduced the burden of OOP spending, particularly as external resources have declined. A generally positive macroeconomic outlook and the government's increasing capacity to collect taxes present opportunities for the Kenyan government to mobilize more resources for health at both the national and county levels, provided health is prioritized in government budgets.

**Resource mobilization** refers to how the health system generates and collects revenue to pay for health. Resource mobilization considers:

1. What are the sources of funding for health?
2. How are these funds collected?
3. Who collects these funds?

Because tax revenues are the largest source of funds for health services in Kenya, resource mobilization for health is directly linked to the government's ability to raise tax revenues. Between 2010 and 2016, the Kenyan government's revenue averaged 25 percent of GDP. Total revenues grew by 96 percent, from KSh 673 billion (\$7.58 billion) in 2010/11 to KSh 1.51 trillion (\$14.88 billion) in 2015/16 (KNBS, 2015 and 2017). Kenya performs well compared to other lower middle-income countries in terms of its ability to mobilize tax revenues (see Figure 3.1). Over the same period, taxes contributed about 90 percent of total government revenues.

**Figure 3.1. Tax Revenue to GDP Ratio among Peer Countries, 2015**

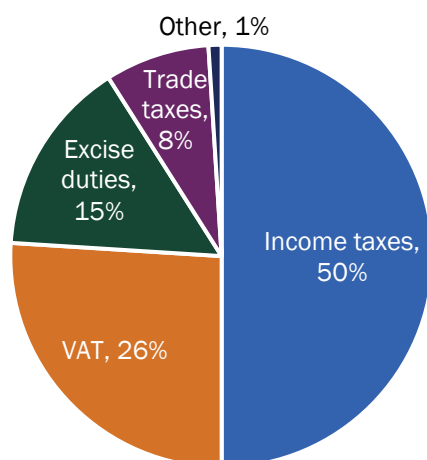


Source: KNBS, 2015; World Bank, 2015

Recent tax reforms have contributed to growing revenues, particularly through income taxes. Income taxes more than doubled between 2010/11 and 2015/16 and are expected to continue to grow in the future through a tax amnesty, higher compliance, and personal identification numbers (KNBS, 2015; KNBS, 2016; KNBS, 2017; KPMG, 2017). While tax revenue is dominated by income taxes, which account for approximately half of total tax revenue,

revenue collection from other sources is improving as well, especially VAT and excise taxes, which contributed 31 percent of total tax revenue over the last four years (see Figure 3.2).

**Figure 3.2. Average Composition of Tax Revenue, 2013–2017**



Source: Budget policy statements for 2012, 2014, and 2016 (National Treasury, 2012; 2014; 2016)

Despite positive trends in tax revenue, there is still a need for the government to improve its ability to mobilize tax revenue. Total revenues have not met targets, falling short by 7 percent in 2017 (Anyanzwa, 2017). Revenues are also being outpaced by expenditures used to finance public debt, wages, and infrastructure development over the last six years. Government expenditures have increased for economic affairs,<sup>4</sup> general public services, and debt repayments, while declining for social services<sup>5</sup> (KNBS, 2015; KNBS, 2016; KNBS, 2017).

**Table 3.2. Breakdown of County Expenditures**

	2014/15	2015/16	2016/17
<b>Recurrent vs. Development Expenditures</b>			
Recurrent Expenditures	64.1%	65.0%	67.6%
Development Expenditures	35.9%	35.0%	32.4%
<b>Expenditures by Economic Classification</b>			
Personnel	40.0%	40.2%	41.0%
Development Expenditures	35.1%	35.0%	32.0%
Operations and Maintenance	25.0%	24.8%	27.0%

Source: Annual county governments budget implementation review reports for 2015, 2016, and 2017 (Controller of Budgets, 2015; 2016; 2017)

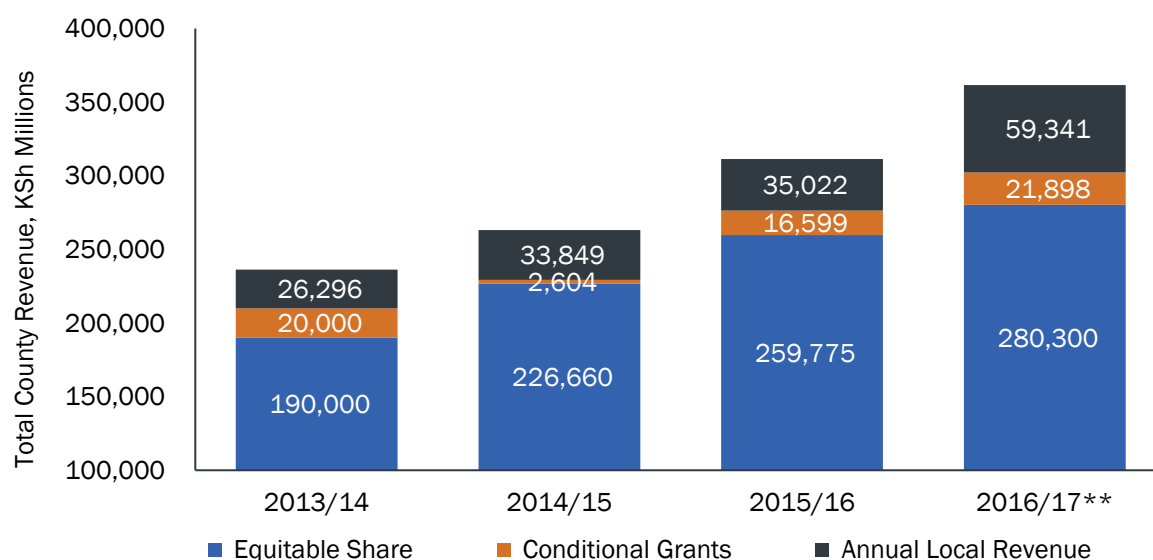
Kenya has devolved some functions to counties and counties are responsible for a significant share of public service delivery. As stipulated in the 2010 Constitution (ROK, 2010), the

<sup>4</sup> Including general economic, commercial, and labor affairs; agriculture, forestry, fishing, and hunting; fuel and energy; mining, manufacturing, and construction; transport; communication; and other industries.

<sup>5</sup> Including health, education, and social protection.

national government provides resources to counties to support these services through shareable revenue—anticipated national revenue shared among counties according to a formula based on population, equal share, land share, fiscal effort, development, and poverty rates. Since 2013, national transfers to counties, including shareable revenue and conditional grants, have increased in absolute terms, but remained constant as a percentage of GDP—at around 4 percent (KNBS, 2015; KNBS, 2016; KNBS, 2017). Although county internally generated revenues have been increasing, the majority of county funds are still generated at the national level (see Figure 3.3). County expenditures have also been increasing, with a significant share spent on recurrent expenditures, like personnel (see Table 3.2).

**Figure 3.3. Sources of Annual County Revenues**



Source: County Allocation Revenue Bills for 2014, 2015, and 2016 (Republic of Kenya, 2014; 2015; 2016) \*\* Provisional

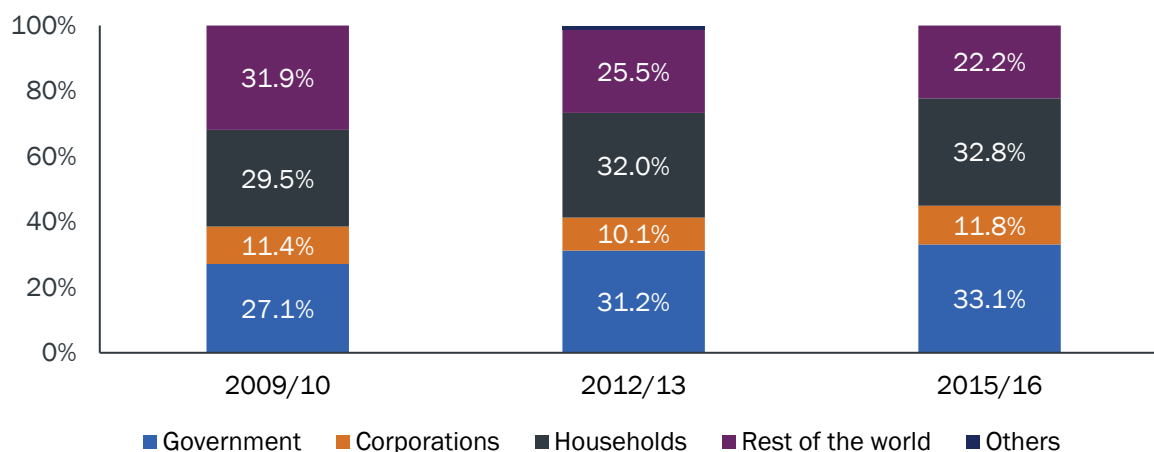
### ***Trends in resources for health***

Devolution has significant implications for how resources are mobilized for health, specifically. Overall, per capita health spending has increased in Kenya, from \$51 per capita in 2001/02 to \$79 per capita in 2015/16 (MOH, Forthcoming b). This increase, however, is only partly attributable to public funds. Public spending on health has increased in absolute terms in recent years, but stagnated relative to GDP and to other spending. For the last decade, the Government of Kenya has spent an average of approximately 2 percent of GDP annually on health. Since 2012, annual government health spending has consistently accounted for approximately 6 percent of total government expenditure.

Households and external partners contribute over half of the resources spent on health (see Figure 3.4). Since 2010, external funding as a proportion of total health expenditure has declined by about 10 percent, part of a larger global trend. Increased public spending, which rose from 27.1 percent to 33.1 percent of total health expenditure over the same period, has compensated for some of this decline. The government has not, however, completely filled the gap left by decreases in external funding. The burden of OOP on households has also increased, with important implications for access to care and financial protection.



Figure 3.4. Total Health Expenditure by Source



Source: Kenya National Health Accounts, 2015/16 (MOH, Forthcoming b)

Households account for one-third of total health expenditure and for the vast majority of private spending on health. Almost 75 percent of private health spending is out of pocket, while a marginal amount is pooled through pre-payment schemes (discussed further below). OOP expenditure has declined somewhat as a share of private spending (from 77 percent in 2001/02 to 67 percent in 2005/06 [MOH, 2017]), thereby reducing the burden on households.

Some OOP expenditure take the form of user fees at public facilities—part of cost-sharing with the government. The Government of Kenya has made efforts to reduce the burden of cost-sharing by eliminating user fees for primary and maternal healthcare (Discussed in more detail below, see Box 3.1). Public secondary care facilities and hospitals, however, continue to charge user fees. With the exception of three large referral hospitals controlled by the national government, user fees from public facilities flow to the CRA and contribute to county revenue. OOP expenditure data also capture significant household expenditure for private services but do not distinguish this spending from public user fees.

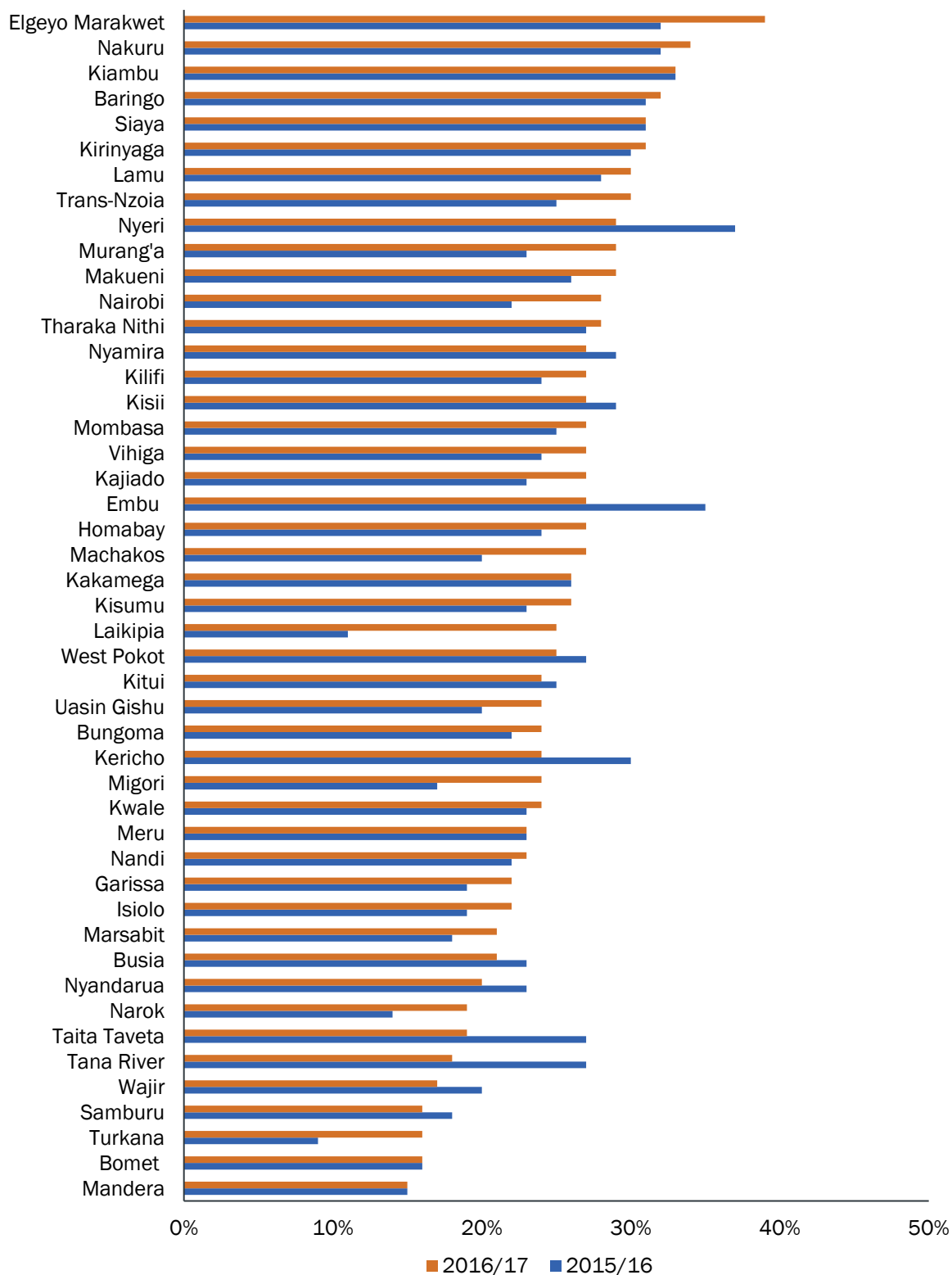
### County-level resources for health

Devolution changed the way resources flow through the health system, giving counties far greater control over health spending. In line with the 2012 *Public Financial Management Act* (ROK, 2012) all resources from the national level must flow through CRAs (see Box 3.1). The devolved health financing system creates an opportunity to cross-subsidize across richer and poorer counties. The shareable revenue formula includes a poverty metric (weighted as 18 percent of the determination of a county's share). By considering poverty in the allocation, some resources from wealthier counties are allocated to poorer counties. It is not clear whether the formula is adequate to cross-subsidize across specific development needs, like health, to account for counties' differing health burdens.

Further, under the devolved system, resources for health are at the discretion of the county and reflect county priorities. Even if shareable revenue is sufficient to meet a county's health needs, it is up to the county government to allocate these resources. County allocations to health have increased since devolution, nearly doubling in absolute terms between 2013/14 and 2016/17. Health accounted for 21.5 percent of county spending in 2013/14 and 25 percent in 2016/17 (MOH, 2017). These averages, however, mask considerable variation among counties (see Figure 3.5). Nyeri, for example, spent 39 percent of its budget on health

in 2014/15, while Tharaka Nithi spent just shy of 10 percent (MOH, 2017). There is also significant variation from year to year, depending on competing priorities for county resources (see Figure 3.5).

**Figure 3.5. Percentage of Total Budget Allocated to Health, by County, Fiscal Year (FY) 2015/16 and 2016/17**



Source: MOH, 2017

## Pooling

Resources mobilized for health in Kenya are pooled at four levels—government (national and county governments), health insurance (social and private), households, and nongovernmental and community-based organizations (NGOs and CBOs)—each of which pool different resources to pay for different purposes.

- *National government:* The national government pools tax and other revenues to fund MOH functions, three large tertiary hospitals, disease-specific programs, parastatals, and counties.
- *County governments:* Counties pool shareable revenue, conditional grants, and locally generated revenues to fund county social services, like health, including free primary and maternal healthcare. This allows for some degree of cross-subsidization across richer and poorer, and sicker and healthier, populations within the county.
- *Social insurance—largely NHIF:* The NHIF pools resources from payroll deductions, voluntary contributions, and government subsidies to pay for defined services at public and private hospitals, including free maternal healthcare through the *Linda Mama* program. It cross-subsidizes across members, including those from both the formal and informal sectors, although cross-subsidization is limited by fragmented membership pools.
- *Private insurance:* Private insurance pools funds from employers and individuals to pay for healthcare services provided in the respective contracts (see Health Insurance section below for more details).
- *Households:* Household pool funds to pay for health through user fees or by paying for insurance premiums.
- *NGOs, CBOs, and donors:* These entities pool funds to deliver services to targeted programs and populations.

As outlined in the *Health Financing Strategy*, the Kenyan government is considering reducing fragmentation at pooling level and is positioning the NHIF to play a growing role in pooling funds for health. The challenge will be ensuring that the NHIF pool is large and diverse enough to effectively cross-subsidize the poor and vulnerable and to be sustainable in the long term. Further, increasing the amount of funds pooled through the NHIF will not eliminate the need for government-pooled funds to pay for public health functions.

### **Pooling at the county level**

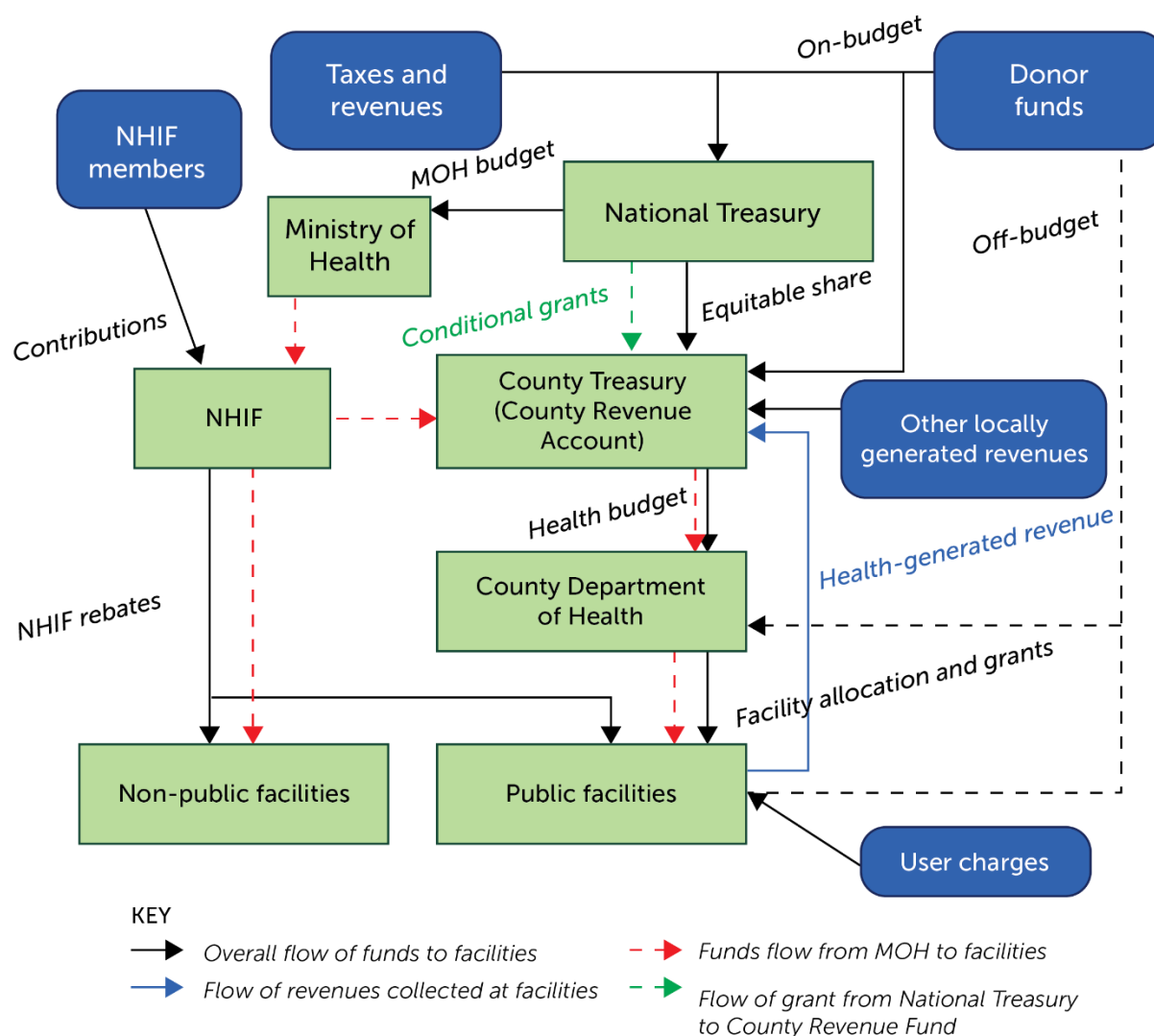
The majority of tax revenues ultimately spent on health are generated at the national level and pooled through the National Treasury. Pooling revenue at the national level and sharing across counties allows wealthier counties to cross-subsidize poorer counties. The formula for determining county allocations accounts for poverty levels, which should support poorer counties in spending the same resources per capita on health as wealthier counties.

Prior to devolution, districts (now counties) used to receive funds from the MOH either in cash or commodities to support health services. However, this arrangement created bureaucracies, with less than 50 percent of the funds reaching health facilities (MOH, 2005). This led the MOH to create the Health Sector Service Fund and the Hospital Management Services Fund, which transferred funds directly to hospitals and lower-level facilities (see Box 3.1). However, the devolved system gives counties discretionary power over how to spend health resources, which are disbursed to the County Department of Health. County

departments, like the County Department of Health, create development plans each year, which are consolidated into the county’s annual development plan, which articulates priorities for funding in the budgeting process. The resources actually available depend on the total amount of resources pooled from shareable revenues, locally generated revenue, and user fees from public facilities, all of which are pooled in the CRA. As noted above, the county government then decides what portion of these funds are allocated to health (see Figure 3.5).

Interviews with the county health management teams (CHMTs) provided insight into the challenges these teams are facing in accessing funds. In most counties visited, CHMTs have no authority over health funds, health activities are not prioritized when payments are made—resulting in unpaid bills, facilities don’t access funds on time, and reimbursement from the NHIF and the MOH are not always fully disclosed by facilities. Figure 3.6 illustrates in greater detail how resources are pooled and flow to and from the CRA.

**Figure 3.6. National- and County-level Flow of Health Funds Post Devolution**



Source: HP+ analysis

### Box 3.1. Free Healthcare Policies, 2013

In 2013, the Kenyan Government enacted two policies to reduce financial barriers and increase access to basic health services:

1. Abolished user fees at public primary healthcare facilities
2. Implemented a policy of free maternal health services in all public facilities through the *Linda Mama* (“Protect Mothers”) program.

Under the new policies, the government reimburses facilities for these services. In the first year, the government allocated Ksh 700 million and Ksh 3.8 billion, respectively, to compensate facilities for the loss of user fee revenue and the provision of free maternal health services. Since then, these reimbursement expenditures have continued to grow.

Federal resources for these initiatives are also pooled in county revenue accounts (CRAs), then used to purchase a specific package of services. Post-devolution, public health facilities and dispensaries are reimbursed directly by CRAs for primary health services. Since 2016, *Linda Mama* reimbursements have been administered through the NHIF, which reimburses public facilities and contracted private facilities for a benefits package of services, which includes antenatal, delivery, postnatal, and newborn care (through the first year of life). NHIF receives funds from the national government to finance *Linda Mama* reimbursements as conditional grants flowing through CRAs (see Figure 3.6). Facility reimbursement are based on the amount of services provided and a combination of capitation and fee-for-service (MOH, 2016).

	Abolishing User Fees for Primary Healthcare	Offering Free Maternal Healthcare ( <i>Linda Mama</i> )
<b>Services Covered</b>	Primary healthcare	Package of benefits for women and newborns through the first year, including antenatal care, delivery, and postnatal care
<b>Facilities Included</b>	Public primary health facilities, including public dispensaries and health centers	Contracted public and private health facilities
<b>Costs Reimbursed</b>	10 or 20 Ksh per visit (value of abolished user fees)	Capitation payment for outpatient services (Ksh 1200); fee for service for deliveries and inpatient services
<b>Government Expenditure FY 2013/14</b>	Ksh 700 million (US\$8.06 million)	Ksh 3.8 billion (US\$43.7 million)
<b>Government Expenditure FY 2014/15</b>	Ksh 900 million (US\$8.63 million)	Ksh 4.0 billion (US\$42.9 million)
<b>Government Expenditure FY 2015/16</b>	Ksh 900 million (US\$7.8 million)	Ksh 4.3 billion (US\$43.1 million)
<b>Government Expenditure FY 2016/17</b>	Ksh 900 million (US\$7.8 million)	Ksh 3.8 billion (US\$37.1 million)
<b>TOTAL</b>	Ksh 3.4 billion (US\$32.9 million)	Ksh 15.95 billion (US\$154.5 million)

## Health insurance

As a pooling mechanism, health insurance in Kenya pools government resources as well as resources from households and private companies. Insurance coverage in Kenya is increasing and Kenya's progress in this area is favorable in comparison with neighboring countries. However, overall insurance coverage remains low, around one-fifth of the population. The vast majority of insured Kenyans are covered by the NHIF, while about 12 percent are covered under private and community-based schemes (see Box 3.2). The Kenyan government aims to increase the resources pooled through the NHIF by increasing enrolment, which will require promoting an attractive benefits package and successfully targeting members of the informal sector and the poor.

There are disparities in insurance coverage across geography and socioeconomic group. Coverage is higher among urban Kenyans (around 27 percent) than in rural areas (about 12 percent) (MOH, 2013). This may be a reflection of higher informal sector employment rates in rural areas or a function of socioeconomic status, as poverty is higher in Kenya's rural areas (Kazungu and Barasa, 2017). Wealthy Kenyans are far more likely to be insured; 42 percent of the highest wealth quintile are insured, while only 2.9 percent of the lowest quintile are covered by insurance (MOH, 2013).

While 88 percent of insured Kenyans are enrolled in the NHIF, there is ongoing debate about the exact proportion of the population covered by the scheme (MOH, 2013). The NHIF recently estimated that it covers about 25 percent of the population, but a study of 2014 DHS data estimated NHIF coverage to be only 15.8 percent, with only 20 percent of the population enrolled in any form of insurance (Kazungu and Barasa, 2017). These discrepancies may be a function of how the NHIF estimates enrolment—multiplying the total number of principal members by the average household size of 3.5. This may overestimate coverage by double counting families in which both spouses are enrolled as primary members (i.e., where both spouses are members of the civil service) or by including inactive primary members. Improvements in the NHIF information and communication technology system could help identify these households and create better coverage estimates.

Overall, NHIF membership is growing, fueled largely by growth in informal sector enrolment. The 2017 Economic Survey reported that NHIF membership nearly doubled between 2011 and 2016 (KNBS, 2017). The formal sector still accounts for the majority of NHIF members (59 percent), but informal sector membership is growing more quickly than formal sector membership (see Figure 3.7). Informal sector membership grew by 25 percent in 2015/16 compared to 13 percent growth in formal sector membership (KNBS, 2017). This is a reflection of a concerted and sustained effort by the NHIF to reach the informal sector.

### Box 3.2. Health Insurance Coverage by Type

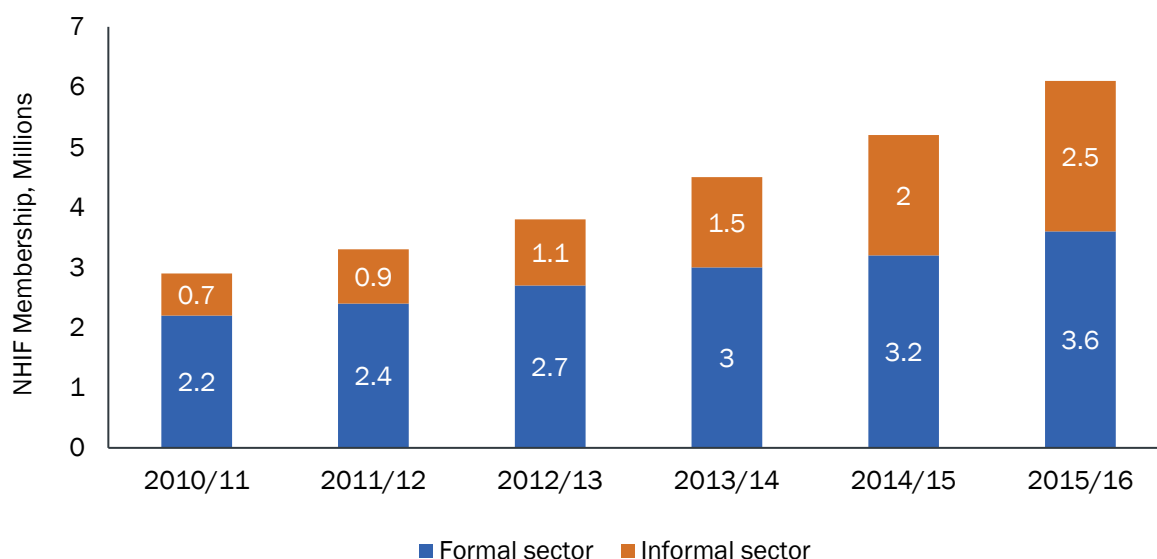
Approximately 17 percent of Kenyans are insured (MOH, 2013, KNBS et al. 2014). The Kenya Household Health Expenditure and Utilisation Survey (KHHEUS) reported enrolment of those insured across type of scheme:

- NHIF: Approximately 88%
- Private insurance: 9.4%
- Community-Based Insurance: 1.3%

These numbers should be interpreted with some caution. Insured Kenyans may be covered under more than one scheme. For example, it is not uncommon for formal sector employees enrolled in NHIF to purchase additional private insurance coverage. The exact extent of overlap across schemes is unclear.

With only about 19 percent of informal sector employees enrolled in the NHIF, however, there is still considerable room for growth (KNBS, 2017).

**Figure 3.7. Active NHIF Membership by Employment Group**



Source: KNBS, 2017

The private health insurance market in Kenya is growing, with coverage increasing from approximately 600,000 in 2009 to 1.5 million in 2016 (Barnes et al., 2009). Private health insurance is also accounting for an increasing proportion of total health expenditure, growing from seven to 11 percent between 2009/10 and 2015/16. The market remains relatively small, however, covering only about 3 percent of the population and accounting for less than 10 percent of all those insured (MOH, 2013). Most private plans target formal sector workers and wealthier socioeconomic groups. About 17 percent of wealthy insured Kenyans are enrolled in private sector schemes, while private coverage is virtually nonexistent among the poorest Kenyans (MOH, 2013).

Community-based health insurance schemes target lower-income, informal sector members who are unlikely to be covered through the NHIF or private schemes. These schemes are community owned and managed, generally with low premiums and correspondingly limited benefits packages. Some community-based health insurance schemes have created networks to increase the pool of resources for expanded benefits packages. This model has yet to prove sustainable, however, and the coverage of community-based health insurance schemes remains insignificant. In fact, coverage declined from about 177,000 members in 2011 to 93,765 in 2016 (Munge et al., 2016).

While both private and community-based insurance schemes play a role in pooling resources for health, the NHIF is the dominant provider of insurance in Kenya. Initially established in 1966 to provide insurance for formal sector employees, the NHIF's covered populations, contribution rates, and schemes have evolved since then. Participation is still compulsory for formal sector employees and informal sector workers may join voluntarily. Until 2015, contribution rates had been fixed, for decades, at between 30 and 160 Kenyan shillings (Ksh) depending on income. The NHIF significantly revised and increased the contribution rates in 2015 as part of an effort to expand the services covered. Rates now range from Ksh 150 to Ksh 1700 based on income, and informal sector members pay a fixed premium of Ksh 500 (NHIF, 2017).



The NHIF currently operates three separately pooled schemes that cover different subpopulations, summarized in Table 3.3. The resources for each of these schemes are pooled and spent independently of the others. This separation limits the schemes' ability to effectively pool resources and risk to truly cross-subsidize across populations.

**Table 3.3. NHIF Schemes**

Dimension	National Plan		Health Insurance Subsidy Programme (HISP)	Civil Servants and Disciplined Services Scheme
	Formal Sector	Informal Sector		
Population served	Salaried private formal sector employees (Minimum income of Ksh 1,000/month; minimum age 18)	Self-employed and others in non-salaried workforce	Indigent and vulnerable population; selected from a government-developed list	Salaried, public sector employees including police, prison and armed forces
Enrolment type	Mandatory	Voluntary	Voluntary	Mandatory
Collection method	Payroll deduction	Fixed voluntary contribution	Government subsidized (with support from the World Bank)	Payroll deduction
Monthly premium	Ksh 150-1,720/month	Ksh 500/month/Family	N/A	Ksh 150-1,720 (National Police and Prison Service premiums paid in lieu of previous Ksh. 5,000 monthly risk allowance)

Source: Data analysis by NHIF

While the growth in enrolment is promising, the NHIF must expand its coverage considerably if it is to play the central role in advancing UHC envisaged by the *Health Financing Strategy*. Higher enrolment will increase pooled resources for providing health services and extend financial protection to a greater proportion of the population. The NHIF will also have to reduce fragmentation across schemes to more effectively pool resources, particularly to provide for poorer and higher health need populations. As it expands, the NHIF will have to efficiently purchase a benefit package that is attractive to those with an ability to pay (discussed further below), continue to enroll informal sector workers, and better target resources to cover poor and vulnerable populations.



## Purchasing

In addition to pooling resources for health, national and county governments are also major purchasers of healthcare services. The Kenyan government purchases services through a range of mechanisms, including budget allocations and conditional grants, and is increasingly channeling resources for purchasing through the NHIF, which acts as both a pooling and purchasing agent. Households also play a significant role as purchasers, largely through OOP payments at the point of care. Current government purchasing is predominately passive, and the large purchasing role of households is a reflection of insufficient coverage of pooling mechanisms. As outlined in the *Kenya Health Financing Strategy*, as Kenya moves towards UHC, its objective is to prioritize more strategic health purchasing with funds pooled through the NHIF as a means of both using funds more efficiently and further extending financial protection to the population (MOH, forthcoming a). Additional information on purchasing can be found in the Kenya Health Financing System Assessment (HP+, forthcoming).

**Purchasing** refers to the mechanisms used to pay providers for healthcare services. The Ministry of Health, a social security agency, insurance providers, or individuals can purchase healthcare services. The design of these mechanisms considers:

1. What services should be purchased?
2. Who should services be purchased for?
3. Who should services be purchased from?
4. How should providers be paid for services?

## Financial Protection

Module 4: Service Delivery will discuss access to healthcare services. However, this module looks specifically at financial protection against the costs of seeking these services. A well-functioning health financing system should mobilize and pool sufficient resources and spend these resources in a way that offers protection against the cost of care. In Kenya, however, household expenditure consistently accounts for approximately one-third of total health expenditure and only a small percentage of these resources are pooled. While there are ongoing political efforts to reduce OOP expenditure—including *Linda Mama*, free primary healthcare, and increasing pooling through expanded NHIF coverage—Kenyan households are still facing financial risk.

OOP payments at the point of service act as a barrier to use of healthcare services. In 2013, 21.4 percent of Kenyan households referenced the cost of healthcare as the primary reason for not accessing services. This represents a decline from 39 percent in 2003, but remains high. The burden of OOP expenditure is especially high on the poor. Among rural households, for example, self-reported illness is 2.5 times higher among the bottom two wealth quintiles than the wealthiest quintile. At the same time, the poorest quintiles are 3.2 times less likely to seek healthcare. Further, despite their higher disease burden, the lowest two quintiles spend 4.8 times less than the wealthiest quintile (MOH 2013).

Health spending can also push Kenyan households into poverty, particularly among the poor, where the margin of economic security is thin. The *Kenya Household Health Expenditure and Utilisation Survey* (KHHEUS) estimated that 6.2 percent of Kenyans experience catastrophic health expenditure, defined as health expenditure greater than or equal to 40 percent of a household's non-subsistence income. This average masks considerable disparities across socioeconomic groups and geography. A 2017 assessment by Barasa et al., based on data from the 2013 survey, found that incidence of catastrophic health expenditure is 10 percent among poor households, which are 5.5 times more likely to incur

catastrophic expenditure than wealthy households (Barasa et al., 2017). These disparities are even more pronounced across counties. Kilifi, Makueni, Nandi, and Nakuru counties, for example, all have rates of catastrophic health spending below 4 percent, while in Turkana, the rate is approximately 18 percent (Barasa et al., 2017).

## Key Findings and Recommendations: Health Financing

Key Finding	Recommendation
<p>The government's ability to raise tax revenues impacts the availability of resources for health.</p> <p>External funding is declining as a proportion of total health expenditure. Increased government spending has filled some (but not all) of the resulting gap.</p> <p>OOP spending on households has also increased. OOP spending accounts for one-third of total health expenditure, placing a high burden on households.</p>	<p>The Government of Kenya should:</p> <ul style="list-style-type: none"> <li>• Continue to improve overall tax revenue collection, including <ul style="list-style-type: none"> <li>○ Strategic tax amnesties—which can encourage Kenyans to declare more foreign income</li> <li>○ Ongoing support for improvements to electronic excise and VAT tax systems to capture more non-income tax revenue.</li> </ul> </li> <li>• Develop county capacity to collect locally-generated tax revenues</li> <li>• Consider increasing domestic resources for health, including pooling high OOP expenditures to pre-payment schemes</li> </ul>
<p>While the majority of resources for health are generated at the national level, all resources for service delivery flowing from the national level to county governments are channeled through CRAs.</p> <p>The amount of shareable revenue counties receive depends on available revenue and county characteristics such as population and poverty level.</p>	<p>The Government of Kenya should consider including health as a consideration when allocating shareable revenue at the county level. This will help ensure that counties have enough resources to meet their specific health and service delivery needs.</p>
<p>Allocation of resources to health is at the discretion of the counties and health allocations vary considerably across counties and from year-to-year.</p>	<p>County governments should allocate more resources to health, based on a clear understanding of resource needs.</p> <p>Nascent program-based budgeting reforms should be supported and expanded to ensure that resources are linked to intended outcomes and that sufficient resources are allocated to achieve those outcomes.</p>
<p>Over three-quarters of county allocations to health are spent on personnel.</p>	<p>County governments should consider rationalizing the wage bill to free resources for use in acquiring other inputs.</p>

Key Finding	Recommendation
<b>Pooling</b>	
<p>Resources for health are pooled at four levels:</p> <ul style="list-style-type: none"> <li>• Government (national and county)</li> <li>• Health insurance (social, private)</li> <li>• Households</li> <li>• NGOs, CBOs, and donors</li> </ul>	
<p>CRAs:</p> <ul style="list-style-type: none"> <li>• Pool all resources for health at the county level, including national shareable revenue, conditional grants (i.e., for Linda Mama and free primary healthcare), and internally generated revenues.</li> <li>• Function as a pool, with county decisions on allocation determining whether pooled resources for health are sufficient.</li> </ul>	<p>To ensure cross-subsidization, counties must allocate enough resources to health and effectively target those resources to poor and vulnerable populations.</p>
<p>Health insurance pools government and private resources.</p> <ul style="list-style-type: none"> <li>• Approximately one-fifth of Kenyans are insured. The vast majority (approximately 88 percent) of these individuals are covered through NHIF, with the rest covered by private and community-based schemes.</li> <li>• There are socioeconomic disparities in insurance coverage, with insurance rates much higher among urban populations and higher wealth quintiles.</li> <li>• The Government of Kenya aims to increasingly pool resources for health through expanded coverage of NHIF.</li> </ul>	<p>The NHIF should:</p> <ul style="list-style-type: none"> <li>• Increase the size and diversity of the pool to sustainably and effectively pool risk and resources.</li> <li>• Increase enrollment, with particular emphasis on enrolling informal sector workers.</li> <li>• Reduce fragmentation by pooling resources across schemes covering different populations.</li> </ul>

Key Finding	Recommendation
<b>Purchasing</b>	
<p>National and county governments are the primary purchasers of health services.</p> <p>Households primarily purchase services from a range of public and private providers, with an increasing percentage of total health expenditure going to private providers. More data, like the forthcoming Kenya Integrated Budget Survey, is important for a more detailed understanding of who households are purchasing services from and at what cost.</p> <p>Government purchasing is largely passive, based on input-based, line-item budgeting.</p> <p>At the national level, efforts to move toward more strategic purchasing are centered on shifting increasing purchasing responsibility to the NHIF.</p> <p>Efforts to introduce program-based budgeting and performance-based financing schemes are helping to move counties toward more strategic purchasing, but current purchasing is still dominated by passive mechanisms.</p> <p>NHIF accredits and purchase services from both public and private providers. It pays for services through a mix of mechanisms including fixed reimbursement, fee-for-service, and capitation depending on the type of service. There are challenges in actual implementation of these mechanisms, including linking payment to quality, potential for fraud, and timeliness of payment.</p> <p>NHIF is expanding the package of services it purchases to cover an inclusive list of inpatient, outpatient, and ambulatory services. While the list of covered services has grown, it is not clear that all of these services are actually being procured.</p>	<p>At both the national and county level, the government should move away from line-item, input-based budgeting and accelerate program-based budgeting reforms.</p> <p>County governments should begin incorporating more performance-based financing schemes to move towards more strategic purchasing of services.</p> <p>NHIF should clearly define and communicate the benefits package to both members and providers. Patients need to know what services they are entitled to and providers need to know which services they will be reimbursed for. This will help ensure that covered services are actually procured.</p> <p>NHIF can improve its payment mechanisms to better control both cost and quality. Moving away from fee-for-service, for example, towards more case-based payments can help encourage efficient use of services. It should also increase ongoing monitoring of provider quality, particularly for capitation payments, and link payment to quality services.</p> <p>Institutional and legal reforms at NHIF are necessary to make the entity more efficient and enabling it to effectively play its role as a social health insurer.</p>

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## 4. Service Delivery

The WHO defines service delivery as “how inputs and services are organized and managed, to ensure access, quality, safety, and continuity of care across health conditions, across different locations, and over time (WHO, 2007).” Kenya’s 2010 Constitution guarantees all Kenyans “the highest attainable standard of health, which includes the right to health care services (ROK, 2010, Cap 4, Part I, Art 43).” Service delivery is at the heart of the Government of Kenya’s ability to deliver on this guarantee. This module provides an overview of how health service delivery is structured in Kenya. It discusses various issues related to service access and utilization, including referral systems, geographic coverage, service readiness, quality of care, financial and sociocultural factors, and equity issues. Throughout, authors will point out connections with other parts of this assessment, including governance, HRH, and health indicators.

KHSSP IV (MOH, 2016a) outlines six strategic objectives for the health sector:

1. Reduce under-five mortality from 74 to 35 per 1,000 live births
2. Reduce the maternal mortality ratio from 488 to 150 per 100,000 live births
3. Reduce the infant mortality rate from 52 to 30 per 1,000 live births
4. Reduce adult HIV prevalence from 5.6 percent to 4.0 percent
5. Increase immunization coverage for children under one year of age from 83 percent to 90 percent
6. Reduce malaria inpatient case fatality from 15 percent to 5 percent

### Organization of Service Delivery

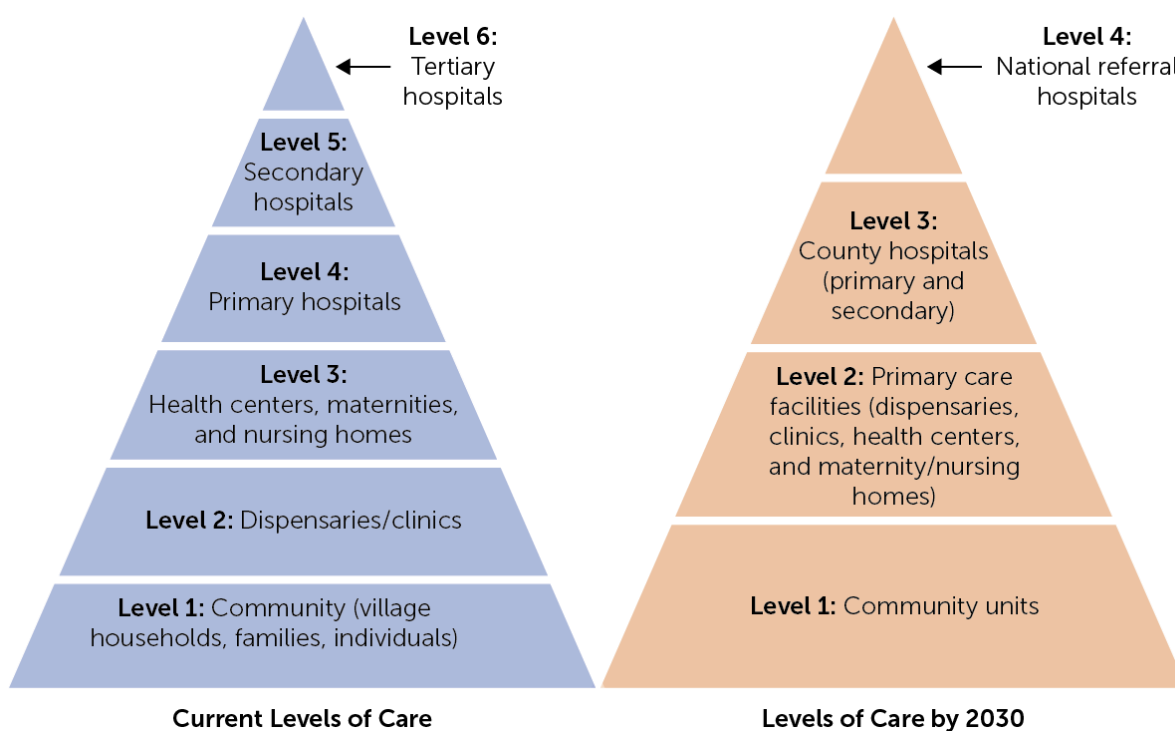
Health services in Kenya are provided by a mix of public and private providers. Private sector providers include for-profit and not-for-profit providers (including FBOs and NGOs). The *Kenya Health Policy, 2014–2030* (MOH, 2014a) also recognizes traditional and complementary medicine providers; however, this module does not focus on this category of providers.

As described in previous modules, Kenya’s devolved system is composed of the national government and 47 county governments. Responsibility for service delivery is fully devolved to county governments, apart from tertiary (Level 6) facilities (described below). Kenya’s hierarchical health service delivery system is composed of six levels. Level 1 consists of community units, each a collection of households staffed by volunteer community health workers. Community units deliver promotive health services through health education, treatment of minor ailments, and identification of cases for referral to health facilities. Primary healthcare services are provided by Level 2 (dispensaries) and Level 3 (health centers) facilities. In addition, these facilities are responsible for coordinating the community units within their area. Level 4 and Level 5 facilities are secondary referral facilities at county level, offering a range of curative services. Some level 4 and 5 facilities are also training centers. Level 6 (tertiary) facilities offer specialized care and training. Although managed by the national government, these tertiary facilities are semi-autonomous organizations (MOH, 2014b). The *Kenya Health Policy, 2014–2030* (MOH, 2014a) outlines a change in the levels of service delivery, with the system transitioning from the current six levels to a four-level structure by 2030:

- Level 1: community units
- Level 2: primary care facilities (dispensaries, clinics, health centers, and maternity/nursing homes)
- Level 3: county hospitals (primary and secondary hospitals)
- Level 4: national referral hospitals

The package of services provided at each level of care is defined in the *Kenya Essential Package of Health (KEPH)* (see Table 4.1).

**Figure 4.1. Kenya’s Health Service Delivery Structure: Current and Future (by 2030)**



**Table 4.1 Summary of Levels of Care, Catchment, Population, and Service Provided**

Levels	Catchment Population	Services Provided
Level 1: Community Unit	5,000	<ul style="list-style-type: none"> <li>• Facilitates individuals, households, and communities to embrace appropriate healthy behaviors</li> <li>• Provides agreed health service</li> <li>• Recognizes signs and symptoms of conditions requiring referral</li> <li>• Facilitates community diagnosis, management, and referral</li> </ul>
Level 2: Dispensaries/Clinics	10,000	Provides: <ul style="list-style-type: none"> <li>• Basic curative, promotive, preventive, and rehabilitative care</li> </ul>



Levels	Catchment Population	Services Provided
Level 3: Health Centers, Maternity/Nursing Homes	30,000	<p>Provides:</p> <ul style="list-style-type: none"> <li>• Curative, promotive, preventive and rehabilitative care for the immediate catchment population</li> <li>• Additional outpatient care, largely limited to minor surgery on an outpatient basis</li> <li>• Limited emergency inpatient services (emergency inpatients, awaiting referral, 12-hour observation, etc.)</li> <li>• Limited oral health services</li> <li>• Individual health education</li> <li>• Maternal care for normal deliveries</li> <li>• Specific laboratory tests (routine labs, including malaria; smear test for TB; HIV testing)</li> </ul>
Level 4: Primary Hospitals	100,000	<ul style="list-style-type: none"> <li>• Serves as the principal referral level for all KEPH interventions from levels 1–3</li> </ul> <p>Provides:</p> <ul style="list-style-type: none"> <li>• Level 2 and 3 functions for the surrounding area</li> <li>• Additional Level 4 services, including: <ul style="list-style-type: none"> <li>○ Referral-level outpatient care</li> <li>○ Inpatient services</li> <li>○ Emergency obstetric care</li> <li>○ Oral health services</li> <li>○ Surgery (inpatient)</li> <li>○ Client health education</li> <li>○ More specialized laboratory tests</li> <li>○ Radiology services</li> </ul> </li> </ul>
Level 5: Secondary Hospitals	1,000,000	<ul style="list-style-type: none"> <li>• Serves as regional referral facilities, providing more comprehensive diagnostic, medical, surgical and rehabilitative care, including reproductive health services and specialized outpatient services</li> <li>• Facilitates and manage referrals from lower levels, and other referral facilities</li> </ul>
Level 6: Tertiary Hospitals	5,000,000	<ul style="list-style-type: none"> <li>• Serves as the national referral facilities, providing highly specialized services, including high-level specialist diagnostic, medical, and surgical care</li> </ul>

Source: Constructed by authors from *Kenya Health Policy, 2014–2030* (MOH, 2014a); *KHSSP IV* (MOH, 2016a), *Public Expenditure Tracking Survey in Kenya, 2012* (PETS-Plus) (Onsumu et al., 2012); and *Kenya HSA, 2010* (Luoma et al., 2010)

## Referral system

*“The right to the highest attainable standard of health in a hierarchical system can be possible only through an effective health referral system.” (MOH, 2014b, p. 12)*

The referral system facilitates continuity of care across the different service delivery levels described above. A referral system is “a mechanism to enable comprehensive management of clients’ health needs through resources beyond those available where they access care (MOH, 2014b, p. 14).” Kenya’s health sector referral system is defined in the *Kenya Health Sector Referral Strategy, 2014–2018* (MOH, 2014b). The strategy outlines a framework for health service referrals organized around four types of movement: client movement, expertise movement, specimen movement, and client parameters movement (see Box 4.1 for details). Client and expertise movement involve the movement of individuals (clients and experts) within the health system, whereas specimen and client parameters movement involve the movement of objects and information (MOH, 2014b).

According to the strategy, “Linkage, guidance on the linkage of services, and continuity of care across different levels has been inadequate (MOH, 2014b, p. 11).” The strategy identifies challenges faced by the referral system at the policy and strategic level, as well as at implementation level. Policy and strategic challenges include the absence of a health sector transport policy to guide the purchase, maintenance, and use of vehicles required for referrals at different levels of care; the lack of a coordination structure to oversee implementation of the referral strategy at national and county levels; financial constraints, including a lack of policy guidelines specifying who is responsible for financing referral services and/or services provided at the receiving facility; and a lack of quality standards and performance monitoring tools to support quality assurance. The tendency of clients to bypass lower-level facilities to access care at higher (less appropriate) levels is a challenge that has both policy and implementation dimensions. At the policy level, the lack of a referral bypass policy contributes to inappropriate self-referrals (MOH, 2014b). At the implementation level, the bypassing of lower-level facilities is driven by a perception among clients that lower-level facilities offer poorer quality services; delays in referrals, even in urgent cases; a lack of nearby primary care facilities; and a lack of awareness among clients and providers about where to access cost-effective care for different conditions. Other implementation-level challenges mentioned in the strategy include inappropriate referrals; inadequately resourced facilities; a

### Box 4.1 Referral Framework

**Client movement:** The client seeking an appropriate level of care at which their health needs are best addressed. Client movement includes “counter-referrals”—when, after receiving services, the client is referred back to the referring facility.

**Expertise referrals:** A referral mechanism that is used when it is more efficient to move expertise or services, rather than clients themselves. This mechanism addresses the lack of medical experts by moving experts around to areas where their services are required, thereby increasing the accessibility and affordability of specialized healthcare services

**Specimen referrals:** Movement of a specimen such as a tissue or blood sample, usually for investigative purposes.

**Client parameters movement:** This type of referral is helpful in avoiding difficult or disruptive movement of clients, when a significant part of client management can be provided at the level of care at which the client presented. Client information can be sent for supportive diagnosis or management guidance, allowing experts located elsewhere to be consulted and participate in client management.

lack of effective referral monitoring systems; inadequate communication and transport systems; inadequate financing; a lack of integration of electronic medical records and a lack of unique patient identifiers; and poor relationships/networking among facilities. This last challenge contributes to a lack of clarity about linkages between different levels of care and different providers at the same level among health providers themselves, as well as the public (MOH, 2014b). Additional clinical management and referral guidelines exist, and, were available in 52 percent of facilities surveyed in the 2016 *Mini-Service Availability and Readiness Assessment (Mini-SARA)* (MOH, 2016b).

Some county governments have sought to improve the client movement aspect of referral services by investing in ambulances. However, some HSA respondents cited challenges related to client movement, including inadequately equipped ambulances, lack of funds for maintenance, and fuel costs. Moreover, they pointed out that the requirement that every referred patient be accompanied by a nurse exacerbates existing staff shortages. Some counties have also invested in motorcycles to transport clients from community units to lower-level facilities.

Respondents cited long turnaround times for specimen referrals as a factor affecting the quality of health service provision. In some counties, respondents reported that increased mobility of medical specialists such as oncologists and obstetricians/gynecologists was contributing to improved health outcomes. Enabling specialists to travel and hold clinics close to patients can improve patient access to specialists, reducing wait times for specialized care and thereby improving health outcomes. Sharing of specialists between counties has been debated in Kenya as a potential remedy to address the shortage of specialized services.

### **Private sector role in service delivery**

As described above, private sector providers (both for-profit and not-for-profit providers) play an important role in health service delivery in Kenya. Table 4.2 summarizes the distribution of public- and private-sector facilities at different levels of care (MOH, 2018).

**Table 4.2. Registered Health Facilities by Managing Authority**

Type of Facility	Managing Authority			Total
	Public	For-profit	Not-for-profit (FBO/NGO)	
Hospitals (Levels 4,5, and 6)	302	150	79	531
Primary Health Facilities (Levels 2 and 3)	4,869	3,750	1,272	9,891
Total	5,171	3,900	1,351	10,466

Source: Kenya Master Health Facility List, accessed May 30, 2018 (MOH, n.d.)

However, there are challenges in the relationship between the public and private sectors in health service delivery. The 2016 Mini-SARA cites the lack of harmonization of public and private functions as a challenge affecting the affordability, quality, and availability of healthcare (MOH, 2016b). Counties visited, as well as FBO and private for-profit umbrella bodies, confirmed the absence of a standard mechanism to guide the relationship between the public and private health sectors in service delivery. The referral system is one example of this. Although there is extensive client movement from public facilities to private facilities, mostly for specialized diagnostic purposes (e.g., CT scans, MRIs), there is no standardized mechanism to guide referrals and counter-referrals between the public and private sectors. Some private facilities (both for-profit facilities and facilities run by FBOs and NGOs) have

ambulances to facilitate client movement for referrals, but rarely to public facilities. Patients in private for-profit facilities who request referral to a public facility are discharged to report to that facility. A mechanism needs to be put in place to govern referrals between the public and private sectors to ensure continuity of care for patients who request referral from private to public facilities and to subsidize the cost of specialized diagnostic services for clients referred from public to private facilities.

The KHSSP IV recommends the development of clear guidelines for the establishment of partnership in service delivery, especially at the national and county levels. To this end, the MOH is developing a Partnership Coordination Framework (MOH, Forthcoming), which aims to provide an enabling environment to achieve harmony and synergy among all health stakeholders to contribute to improving the health of the population.

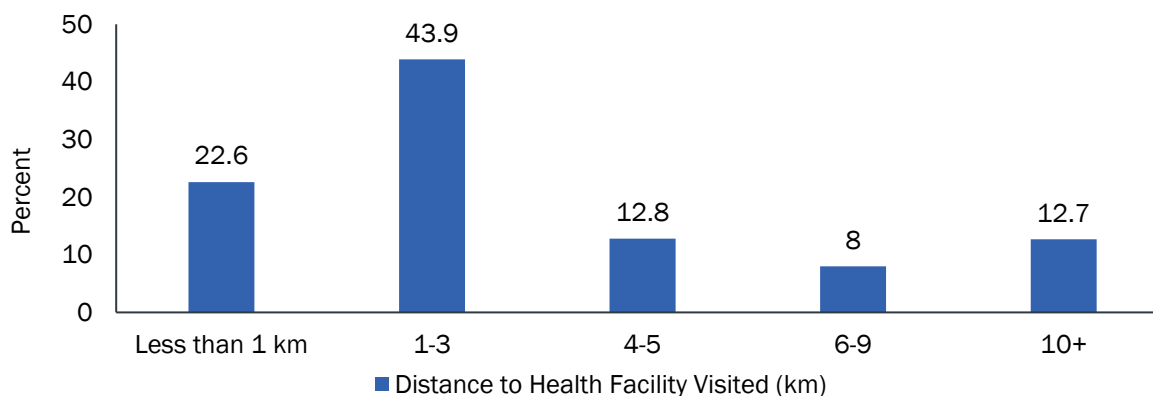
## Access to Health Services

Access refers to the ability of the population to reach appropriate health services as defined in the KEPH. Implementation of the KEPH, in addition to ensuring that those who need services are able to access them without undue financial hardship, is geared toward achieving UHC as envisioned in KHSSP IV (MOH, 2016a). Since their establishment, county governments have collaborated with the national government on projects, such as the Managed Equipment Services program, designed to increase access to services. Access challenges fall into several main categories: physical access (geographic distribution of services, as well as operating hours); readiness of facilities to provide services; financial access; and sociocultural issues such as gender roles and norms, religious beliefs, and cultural norms. HRH are a key factor affecting access to health services and are discussed in Module 5. KHSSP IV outlines strategies to address disparities and improve access to KEPH services by 1) addressing physical, financial, and sociocultural access barriers; 2) increasing demand for services through raising awareness on service availability and improving health seeking behaviors; and 3) enhancing the quality of services.

### *Physical access*

Physical access to a facility plays a key role in utilization of health services. The *2013 Kenya Household Health Expenditure and Utilization Survey (KHHEUS)* demonstrated that, as distance from a health facility increases, there is a significant reduction in the percentage of people seeking outpatient care (MOH, 2014c) (see Figure 4.2). Nearly two-thirds (66.5 percent) of those who sought outpatient care lived within three kilometers of the service provider, while just under 13 percent lived more than 10 kilometers from the health facility where they sought outpatient care. The 2014 KDHS also reported distance to a facility as an impediment to accessing services (KNBS et al., 2015). The report revealed that 23 percent of women of reproductive age cited distance to a facility as one of the reasons they would not seek medical care for themselves, would discontinue a family planning method, or were not intending to use a specific family planning method. The *Kenya Health Policy, 2014–2030* commits to ensuring that all individuals live no further than five kilometers from a health service provider (MOH, 2014a). Progress has been made in this area, as the number of facilities per 10,000 people increased from 1.9 in 2013 (MOH, 2013) to 2.2 in 2016 (MOH, 2016b). However, much work remains, as the mid-term review of KHSSP IV found that only 62 percent of Kenyans were living within five kilometers of a health facility (MOH and WHO, 2016).

**Figure 4.2. Percentage of People Seeking Outpatient Care, by Distance to Where Care was Sought, 2013**



Source: MOH, 2014c

There are geographic disparities in the distribution of health facilities, with a higher concentration of facilities (especially private for-profit facilities) in urban areas than rural areas. Around 66 percent of health facilities are located in rural areas, compared to only 34 percent in urban areas (MOH, 2013). Nairobi County has the most facilities (10.4 percent of all health facilities) and Isiolo County has the least (0.5 percent of all health facilities). However, since devolution, counties in semi-arid areas are investing in the expansion of health facilities, aiming to close this gap and bring health facilities closer to the population.

The presence of a facility within five kilometers does not guarantee that community members will seek services from that facility, especially if it is a primary care facility. As discussed in the “referral system” section above, people sometimes bypass lower-level facilities due to perceptions that the services offered by these facilities are of poorer quality in comparison with services at higher levels of care. It should concern policy makers that people are choosing to bypass public facilities, where services are highly subsidized, to travel farther and pay more for care at a different facility.

According to the community health strategy (MOH, 2006), communities not living within five kilometers of a service provider are to receive outreach healthcare services (preventive and curative) every two weeks. However, respondents reported that outreach healthcare services are currently underfunded, unstructured, and irregular—only conducted during events, rather than every two weeks in accordance with the policy—challenges that are compounded by staff shortages. The Beyond Zero Campaign<sup>6</sup> truck provides mobile clinics offering integrated services every two weeks; however, this initiative is reported to be facing financial constraints. In contrast, outreach conducted by private for-profit and FBO/NGO facilities are structured and regular.

KHSSP IV documented the existence of 4,740 lower-level public sector facilities (3,676 dispensaries and 1,064 health centers), in contrast with the required 5,872 (4,404 dispensaries and 1,468 health centers)—demonstrating a gap of 1,132 facilities. Investments through the National Constituency Development Fund and county governments are focused on developing new lower level facilities to close this gap.

<sup>6</sup> The Beyond Zero Campaign is an initiative of Kenya’s First Lady to improve maternal and child health outcomes.

## Operating hours

Facilities' operating hours also affect physical access to services. According to the *Public Expenditure Tracking Survey in Kenya, 2012 (PETS-Plus)* report (Onsumu et al., 2014), facilities were open an average of six days per week and 12 hours per day (see Table 4.3). Urban facilities (both public and private sector) were open longer (13.5 and 13.4 hours per day, respectively) than rural facilities (12 and 11.9 hours, respectively).

**Table 4.3. Health Facility Operating Hours**

	All facilities	Public	Private	Private Rural	Private Urban	Public Rural	Public Urban
Number of days per week facility is open	5.9	5.8	6.1	5.9	6	5.8	5.8
Hours of outpatient consultation offered per day	12.2	12.1	12.8	12	13.5	11.9	13.4

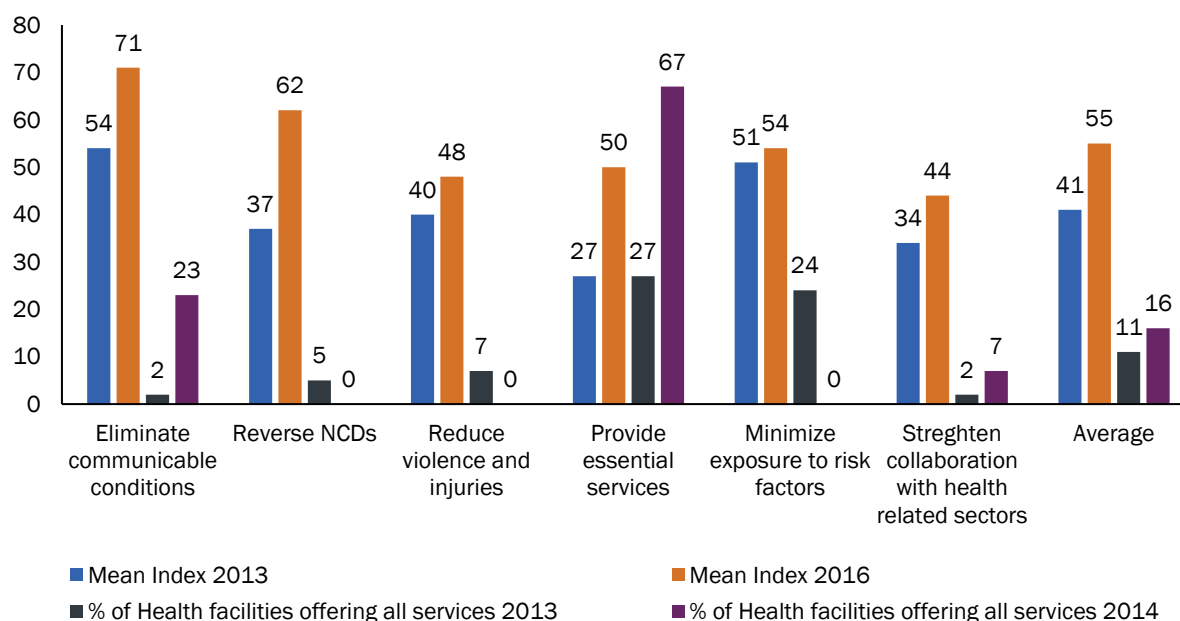
Source: Onsumu et al., 2014

More than three-quarters of clients (83 percent) interviewed for the 2016 Mini-SARA reported that the facility where they often seek services is open long enough to enable them to access treatment whenever they need it (MOH, 2016b). This corroborates the findings of the PET-Plus survey.

## Service availability and readiness

Between 2013 and 2016, access to services increased, as measured by the availability of KEPH services in health facilities (MOH, 2016b). Over that period, the average mean availability index for KEPH services rose from 41 percent to 55 percent, while the percentage of facilities providing all KEPH services increased from 11 percent to 16 percent (see Figure 4.3).

**Figure 4.3. Availability of KEPH Services**



Source: MOH analysis



Over the same period, the readiness of facilities to provide KEPH services also improved. The general service readiness index rose from 57 percent in 2013 to 63 percent in 2016 (MOH analysis). The improvement in service readiness was attributed, among other things, to greater availability of basic equipment, amenities, and standard precautions. The Managed Equipment Services program contributed to this, embarking on a comprehensive program to upgrade 98 hospitals (two hospitals in each county and four national hospitals) to improve access to specialized services countrywide. The equipment under this project is categorized into seven “Lots” (see Table 4.4), and in 2015/16 the MOH had completed about 76 percent of the project, having managed to fully equip 40 hospitals. Manufacturers of the equipment were outsourced to supply, install, train users, and provide maintenance, repair and replacement services for the specialized medical equipment for the duration of the Managed Equipment Services contract (seven years). However, during the HSA, some respondents reported that, although the equipment has been supplied and installed, utilization is still low. Respondents attributed low utilization to staff shortages, which reduce the number of staff trained in use of the equipment, thus impeding access to the specialized services.

**Table 4.4. Distribution of Managed Equipment Services Program Equipment**

Lots	Type of Equipment	Number of Hospitals (Targeted)	Number of Hospitals (Installed)
Lot 1	Theatre	98	69
Lot 2	Surgical equipment and Central Sterile Services Department machines	98	87 with surgical equipment; 86 with Central Sterile Services Department machines
Lot 5	Renal	49	26
Lot 6	Intensive Care Unit	11	3
Lot 7	Radiology	86	84

Source: MOH analysis

Bed population ratio is a key indicator used to determine health facility capacity to provide accommodation services to patients. The 2016 Mini-SARA noted that Kenya’s bed population ratio remained unchanged between 2013 and 2016 (14 inpatient beds per 10,000 population) (MOH, 2016b). Large disparities exist among counties, with some having five inpatient beds per 10,000 population, while others have 25. The low availability of beds may be impeding access to inpatient services.

Health facility infrastructure is a key aspect of service readiness, which is vital to ensuring access to high-quality health services. Investments relating to physical infrastructure, medical equipment, information and communication technology, and transport contribute to facility readiness. The 2013 Service Availability and Readiness Mapping report found that 73 percent of facilities had standard precautions for infection prevention and control (MOH, 2013). Only 67 percent of facilities had the basic equipment (adult weighing scale, child/infant weighing scale, thermometer, stethoscope, blood pressure machines, and light source) required to provide services, and only 47 percent had the basic amenities (room with privacy, power supply, communication equipment, improved water source, adequate sanitation facilities, computer with internet access, and emergency transportation) necessary for service provision. According to the 2016 Mini-SARA survey (MOH, 2016b), the availability of basic equipment, amenities, and standard precautions have markedly improved (see Table 4.5), contributing to improved service quality. Private for-profit health facilities had the highest mean score on the availability of basic equipment, amenities, and

standard precautions. In the public sector, the survey reported efforts on the part of county governments to improve physical infrastructure through the renovation of health facilities.

**Table 4.5. Availability of Basic Equipment, Amenities, and Standard Precautions in Health Facilities (Mean Score, Percent), 2016**

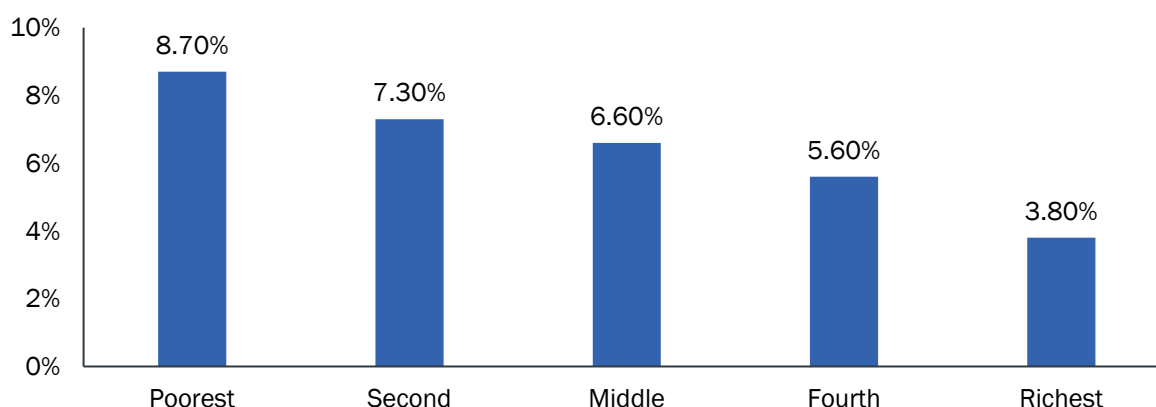
	All facilities	Public	Private Not-for-Profit	Private for Profit
Basic Medical Equipment	83	82	81	88
Basic Amenities	63	61	64	69
Standard Precautions for infection prevention and control	76	74	77	79

Source: MOH, 2016b

### Financial access

Costs of services, together with costs associated with accessing services, affect the affordability of health services. Kenya's health sector is committed to minimizing or removing financial barriers hindering access to health services, guided by the concepts of UHC and social health protection (MOH, 2014a). Less than one-fifth (17 percent) of Kenyans are covered by any form of pre-payment scheme, leaving them vulnerable to OOP expenditures, which made up more than one-quarter (27.7 percent) of total health expenditure in Kenya in 2015/16 (MOH, Forthcoming a). As discussed in Module 3, declines in external funding as a percentage of total health expenditure have increased the OOP burden on households. More than one in 20 Kenyan households (6.2 percent) experience catastrophic health expenditure (defined as health expenditure greater than or equal to 40 percent of a household's non-subsistence income). Figure 4.4 shows catastrophic health expenditure in Kenya by wealth quintile.

**Figure 4.4. Population Experiencing Catastrophic Health Expenditure,\* by Wealth Quintile**



\*40 percent or more of a household's non-subsistence income

Source: MOH, 2014c

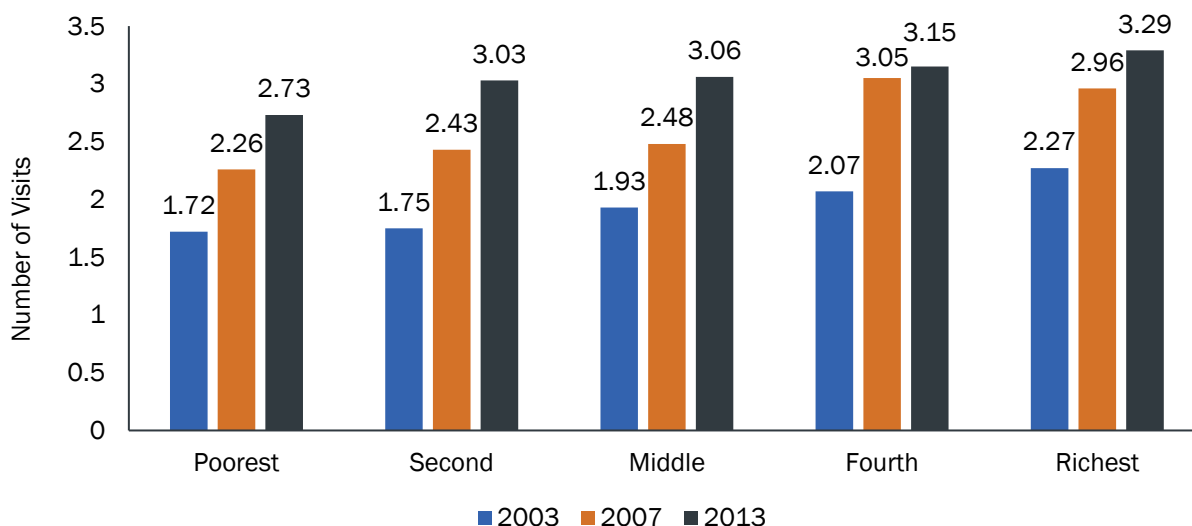
Since 2013, Kenya has enacted two new policies to reduce financial barriers and increase access to basic health services (see Module 3, Box 3.1 for details). A waiver system is also in place to reduce financial barriers to accessing services, especially at hospital level. Expanding NHIF benefits has also improved access to health services. Other efforts to reduce the cost of accessing health services include community-based health financing and private insurance.



Module 3 provides more detailed information on issues related to health financing and insurance.

KHHEUS data on outpatient visits sheds light on the impact of financial barriers on access to care. Although utilization of outpatient services increased marginally in all wealth quintiles between 2003 and 2013, the poor continue to have the lowest utilization rate (see Figure 4.5). This may be an indication of financial barriers among the poorest.

**Figure 4.5. Per Capita Utilization Rates for Outpatient Visits by Wealth Quintile**



Source: MOH, 2014c

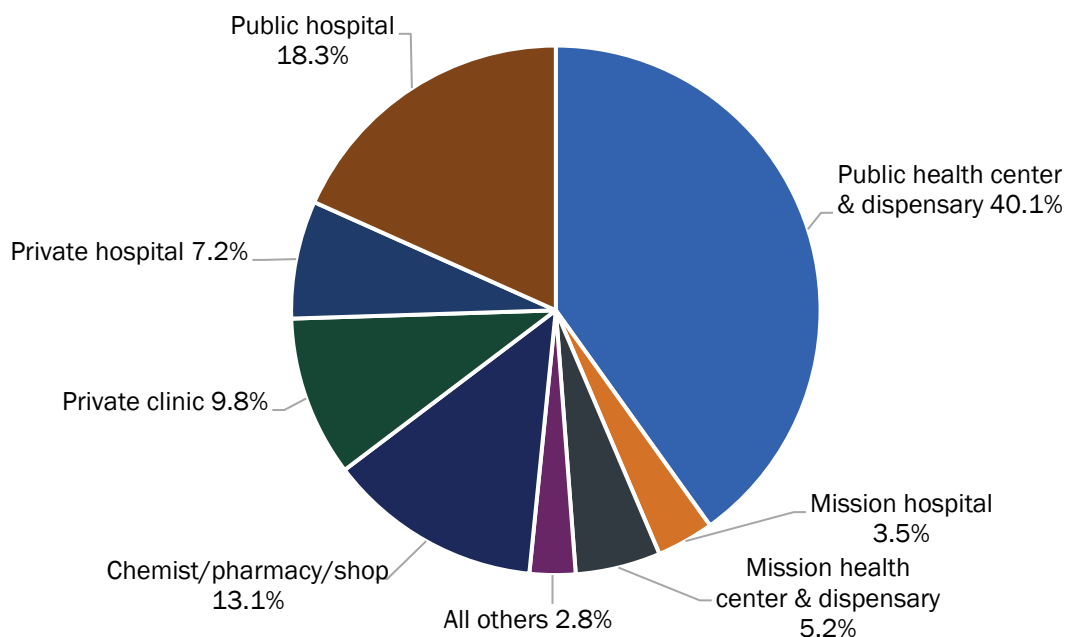
## Utilization and Demand

### *Utilization of health services*

The utilization rate, which refers to the number of times per year a population uses health services, represents access to health services. Utilization is the result of interaction between supply and demand factors. The 2013 KHHEUS found that annual per capita utilization of outpatient services in Kenya increased from 1.9 visits per person per year in 2003 to 3.1 in 2013, suggesting improved access to healthcare (MOH, 2014c). The number of outpatient visits made in the four weeks preceding the survey also increased, from 5.8 million in 2003 to 9.1 million in 2013. The mid-term review of KHSSP IV (MOH and WHO, 2016) and the 2016 Mini-SARA (MOH, 2016b) reported three and two outpatient visits per person per year, respectively.

The proportion of self-reported admissions increased from 1.5 percent of the population in 2003 to 2.5 percent in 2007, then remained the same between 2007 and 2013. The number of admissions per person per year increased from 15 per 1,000 population in 2003 to 38 in 2013 (MOH, 2014c).

Disaggregating outpatient visits by type of health provider and ownership reveals a high dependence on public facilities (MOH, 2014c). Over 58 percent of outpatient visits in 2013 were to public health facilities (public health centers and dispensaries, 40 percent; public hospitals, 18.3 percent) (see Figure 4.6).

**Figure 4.6. Main Providers of Outpatient Health Services (2013 KHHEUS)**

Source: MOH, 2014c

The survey also found rural/urban disparities in utilization, with public facilities accounting for a higher percentage of total outpatient visits in rural areas (66.7 percent) than urban areas (44.1 percent) (MOH, 2014c). This implies that private sector health facilities are a more significant provider of outpatient services in urban areas than in rural areas.

Between 2003 and 2014, coverage of selected KEPH services improved remarkably, as documented in the 2014 KDHS (KNBS et al., 2015) (see Table 4.6).

**Table 4.6. Coverage of Selected KEPH Services (2014 KDHS)**

Service	2003	2008/09	2014
One or more ANC visit	87.8%	90.6%	95.7%
Skilled birth attended	42%	44%	62%
Contraceptive prevalence rate	39%	46%	58%
Unmet need for family planning	25%	26%	18%
Children under five years of age with acute respiratory infection taken to a health facility	46%	56%	66%
DPT-HepB-Hib 3 (pentavalent) immunization coverage among one-year-olds	72%	86%	90%

Source: KNBS et al., 2015

The percentage of pregnant women 15–49 years of age who made at least one ANC visit increased from 87.8 percent in 2003 to 95.7 percent in 2014. To receive the full benefit of ANC, at least four scheduled visits are recommended. However, the 2014 KDHS found that just over half (58 percent) of pregnant women made four or more ANC visits, up from only 47 percent in 2008/09. ANC received from a skilled provider increased from 88 percent to 96 percent over the same period. The percentage of ANC received from a skilled provider

varied from county to county, ranging from 99 percent in Mombasa, Embu, Machakos, and Nandi; to less than 90 percent in Garissa, Marsabit, West Pokot, and Samburu; and less than 60 percent in Mandera and Wajir.

The 2014 KDHS showed the percentage of births attended by a skilled provider increased from 42 percent in 2003 to 62 percent in 2014, as shown in Table 4.6. Only half (50 percent) of births in rural areas were attended by a skilled provider, in comparison with 82 percent of births in urban areas, implying better service coverage in urban areas. At county level, skilled birth attendance ranged from 22 percent in Wajir to 93 percent in Kiambu (KNBS et al., 2015). During the 2017 HSA, respondents in one county reported that skilled birth attendance had risen to 45 percent, a marked increase from the rate reported in the KDHS (22.8 percent). They attributed this change to improved access to services due to an increase in the number of health facilities, free maternity services, training and incentivizing of community health volunteers, community engagement through community health volunteers, engaging fathers and incentivizing mothers to encourage uptake of skilled delivery services, and an increase in the acceptability of services by allowing squatting during delivery and traditional methods of placenta disposal.

Increasing the proportion of births taking place in health facilities is an important factor in reducing health risks to mothers and babies. Table 4.7 shows an increase in the percentage of health facility deliveries in both urban and rural areas. However, geographical inequities persist, with higher rates of facility-based deliveries in urban areas than in rural areas. This could be an indicator of better access to delivery services in urban areas as a result of higher concentration of health facilities.

**Table 4.7. Percentage of Health Facility Deliveries by Residence**

Residence	KDHS 2003	KDHS 2008/09	KDHS 2014
Urban	70.2%	74.7%	82.0%
Rural	33.2%	35.4%	49.5%

Source: KNBS et al., 2015

The KDHS shows that, although contraceptive prevalence increased from 39 percent in 2003 to 58 percent in 2014, nearly one-in-five (18 percent) currently married women ages 15–49 years have unmet need for family planning, down from 26 percent in 2008/09. There is substantial geographic variation in contraceptive prevalence and unmet need for family planning, indicating disparities in coverage of family planning services. Contraceptive prevalence ranged from 3 percent in the North Eastern Region to 72.8 percent in the Central region. Between 2008/09 and 2014, unmet need for family planning remained higher among rural women (20 percent) than urban women (13 percent) (KNBS et al., 2015).

In 2014, 66 percent of children under five years of age with acute respiratory infection were taken to a facility, up from only 56 percent in 2008/09. Coverage of DPT-HepB-Hib3 immunizations improved as well, rising from 86 percent to 90 percent over the same period (KNBS et al., 2015). County variations exist, ranging from 49 percent in Mandera County to 99 percent in Embu, Makueni, Kiambu, and Nandi counties.

See Module 1, page 8 for discussion of utilization of HIV testing and treatment services.

## Consumer knowledge and demand

Access alone does not guarantee use of available health services. For communities to benefit from access to available services, demand for these services needs to be actively built.

According to KHSSP IV (2014–2018), demand creation efforts are increasing individuals', households', and communities' awareness of health problems and available services and improving health seeking behaviors—helping the population make the best use of available promotive, preventive, and curative health services.

One example of successful demand creation through awareness raising is oral rehydration therapy. Dehydration caused by severe diarrhea is a major cause of morbidity and mortality among young children. Oral rehydration therapy is a simple and effective response and raising awareness and knowledge on oral rehydration salt packets can increase their use. According to the 2014 KDHS, the percentage of women ages 15–49 years who had heard about oral rehydration salt packets increased from 78 percent in 2008/09 to 93 percent in 2014. Correspondingly, the percentage of children treated with oral rehydration salts increased from 38.8 percent to 53.8 percent over the same period (KNBS et al., 2015).

## Equity

Inequities in service delivery persist in Kenya's health system. Regional disparities in access to and utilization of health services are significant, as discussed in "Access to Health Services" above. Urban areas tend to have better access to health services than rural areas. The services available in urban areas also tend to be of higher quality than those available in rural areas. There are also disparities in access and utilization indicators from county to county. Wealth has a tremendous impact on access to service delivery in Kenya, due in part to the fact that out-of-pocket payments by households and individuals continue to constitute a large share of total health expenditure (see "Financial Access" above and Module 3 for in-depth discussion of how finance affects equitable access to health services.). Gender norms and roles also have significant impacts on health equity, as demonstrated by substantial disparities in utilization of health services among women and men—disparities which are not always straightforward. For example, utilization of HIV testing and counseling services is much higher among women than men (ages 15–49 years) (see Table 4.8). Yet, inequitable gender norms can be a barrier to women's seeking access to care, due to differences in decision-making power and economic resources within households. More than one in 20 women of reproductive age (6 percent) cited needing to get permission to seek treatment as a barrier to accessing medical services (KNBS et al., 2015). Factors affecting men's access to services may include the location and operating hours of facilities, the perception of some facilities as feminized spaces, and masculine gender norms related to strength and self-reliance. Gender norms also affect access to and utilization of care for marginalized populations such as men who have sex with men and sex workers. These groups may be less likely to access services due to stigma and discrimination, among other reasons.

**Table 4.8. Percentage of Women and Men Ever Tested for HIV and Received Results**

Ever Tested and Received Results	KDHS 2008/09	KDHS 2014
Women	56.5%	83%
Men	40.4%	71%

Source: KNBS et al., 2015

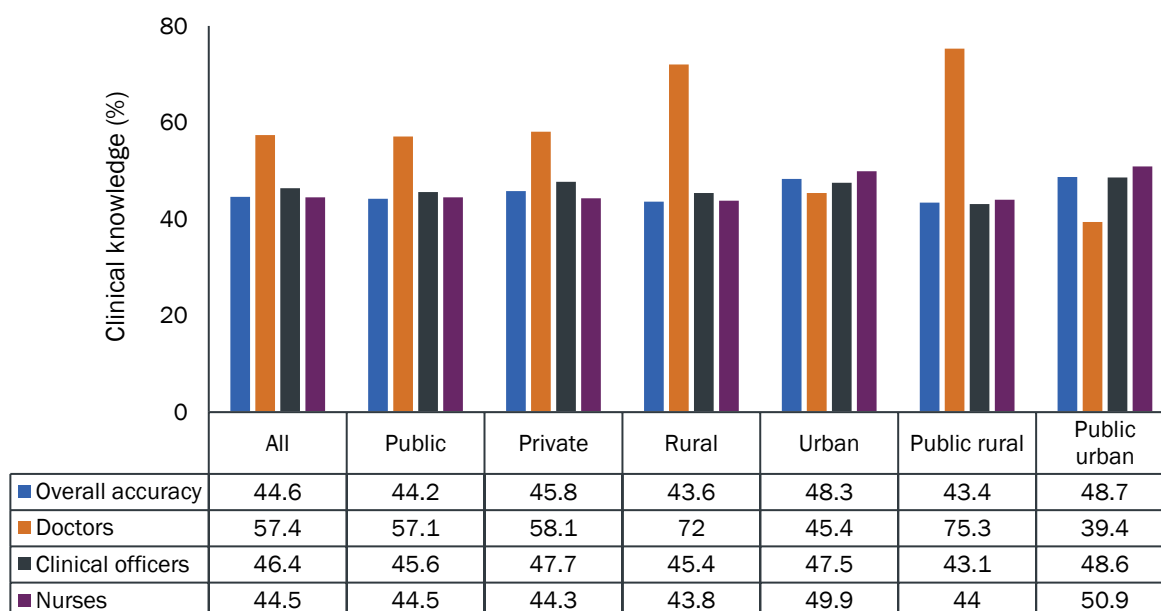
## Quality of Health Services

Government has a mandate to ensure the quality of services in both public and private health facilities. Quality assurance requires defining, communicating, and monitoring quality of care. Module 2 (specifically, the “Legal and Regulatory Environment” section) includes additional information on the health system regulatory framework. For discussion of quality of care in terms of service readiness, see “Service availability and readiness” above.

### Clinical guidelines

Clinical standards/guidelines provide the most up-to-date information on specific services. Adherence to these guidelines is key to ensuring the provision of high-quality health services. The 2004 PETS-Plus report (Onsomu et al., 2014) found lackluster rates of adherence to clinical guidelines related to the management of maternal and neonatal complications. The report found that adherence rates were higher among doctors in private facilities (58.1 percent) than in public facilities (57.1 percent) (see Figure 4.7). These findings show a need for additional measures to ensure adherence to clinical guidelines.

Figure 4.7. Adherence to Processes for Maternal and Newborn Complications



Source: Onsomu et al., 2014

### Client satisfaction

Client satisfaction surveys have also been used as feedback mechanisms for quality assurance. A 2016 client satisfaction survey conducted by the MOH found that 85 percent of clients interviewed reported having received the treatment or services for which they had gone to the facility. The vast majority (96.7 percent) indicated that they would return to the facility if the need arose. More than three-quarters said that they would recommend the health facility to a family member or friend who required medical care.

### Supervision

Supervision is one mechanism that the health sector has put in place to ensure continuous quality improvement and maintenance of the highest standards of care. Supervision is done

at different levels and covers both public and private facilities. Supervision is discussed in greater detail in Module 3 (Specifically, the “Standards” section).

### **Other quality assurance mechanisms**

Other quality assurance mechanisms that are in place include client exit interviews, community dialogue days, suggestions boxes, infection prevention committees, quality improvement teams, drug therapeutic committees, and maternal and newborn death audits. In some counties, suggestion boxes at lower-level facilities were reported as ineffective due to low literacy levels.

## **Key Recommendations: Service Delivery**

Key Findings	Recommendation
<p>Lack of adequate infrastructure for delivery of KEPH services and persistent geographic inequities in access to care, quality of health services, and service utilization:</p> <ul style="list-style-type: none"> <li>• More than one-third (38 percent) of Kenyans still live more than five kilometers from a health facility.</li> <li>• Higher concentration of facilities in urban areas than rural areas</li> <li>• Disparities in utilization of services</li> </ul>	<p>Both county and national governments should:</p> <ul style="list-style-type: none"> <li>• Continue needs-based investment in health infrastructure (both county and national governments).</li> <li>• Expand availability of KEPH services while creating demand to increase utilization.</li> <li>• Allocate sufficient resources for outreach health services and mobile clinics to reach underserved and hard-to-reach populations (e.g., reaching men with HIV testing services).</li> </ul>
<p>Ongoing challenges with referral systems, including a lack of adequate transportation for moving clients and long turnaround times for specimen referral services.</p>	<p>County and national governments should continue investing to improve the effectiveness of referral systems, including supplying adequate funding for fuel and ambulance maintenance.</p>
<p>Lack of standardized mechanisms to guide partnership between public and private sectors in service delivery</p>	<p>Establish a mechanism to harmonize partnership between public and private service providers at both the national and county levels.</p>
<p>The high percentage (8.7 percent) of households in the poorest quintile experiencing catastrophic health expenditure</p>	<p>National and county governments should continue investing in UHC initiatives.</p>
<p>Perceived poor quality of services at primary-level health facilities among community members</p>	<p>Engage communities in managing service quality at nearby facilities.</p>
<p>Uncoordinated functions of regulatory bodies</p>	<p>Establish a mechanism to coordinate the functions of the regulatory bodies.</p>
<p>Inadequate adherence to clinical guidelines</p>	<p>Update clinical guidelines regularly and monitor adherence during supervision visits.</p>
<p>Inadequate supervision</p>	<p>County governments should ensure adequate budget allocation for effective implementation of integrated supervision.</p> <p>County government and partners should conduct joint supervision using the integrated supervision tool.</p>

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## 5. Human Resources for Health

### Overview

WHO defines human resources for health (HRH) as “all people engaged in actions whose primary intent is to enhance health (WHO, 2006).” This definition expands the traditional view of HRH, which focuses on nurses and doctors, to include health managers, educators, and other support workers who are critical to a well-functioning health system. HRH are a critical component of the health system. Kenya has experienced numerous service delivery interruptions over the last five years due to health worker industrial action, making HRH the most visible of all health system blocks. For example, doctors went on a 100-day strike (December 2016 to March 2017) demanding full implementation of a collective bargaining agreement signed with the MOH in 2012. Through the collective bargaining agreement, the doctors advocated for better equipped hospitals, sufficient health staff (doctors, nurses, laboratory staff), adequate compensation, merit-based promotions, deployment and transfers of staff done by a national body, and standardized disciplinary procedures. Nurses followed suit with an even longer strike, which lasted five months (July to November 2017). The nurses demanded full implementation of their collective bargaining agreement, which included payment of risk allowances and uniform allowances. The strikes revealed weaknesses in the ability of the MOH and the Council of Governors to negotiate conflict and effectively manage industrial unrest.

The HRH module seeks to determine the status of HRH in Kenya by looking at the distribution, financing, policy and regulation, training, education, and leadership of HRH in Kenya. The assessment is conducted against the backdrop of devolution in Kenya. As described in previous modules, following the adoption of the 2010 constitution, and the establishment of 47 semi-autonomous county governments, health service delivery (including management of HRH) was devolved to county governments. In addition, this assessment comes at a time when Kenya is keen on achieving UHC, not only from a finance standpoint, but also by ensuring that HRH resources are equitably distributed to match population needs (Campbell et al, 2013).

### **Devolution and HRH**

Following the establishment of county governments in 2013, the MOH conducted a functional analysis to better define the roles and responsibilities of both county and national governments in relation to HRH. This analysis further expanded the functions listed under Schedule 4 of the 2010 constitution (ROK, 2010). The *Kenya Health Sector Human Resources Strategy, 2014–2018* (MOH, 2014) establishes four overall goals:

- Equitable access to specialized health expertise
- Adequate and updated human resources skills at all levels and functions
- Fair and competitive terms and conditions of service
- Equitable access to specialized health expertise

Table 5.1 presents an overview of HRH-related roles and responsibilities at national and county levels.



**Table 5.1. HRH Roles and Responsibilities of County and National Governments**

County Governments	National Government
<ul style="list-style-type: none"> <li>• Collaborate with the national government through the County Public Service Board to define norms for county HRH.</li> <li>• Independently determine county health administrative structure (organograms), taking into consideration national government proposals on this structure.</li> <li>• Set up an intersectoral forum on public human resources in collaboration with the Public Service Commission.</li> <li>• Establish necessary staffing to support service delivery.</li> <li>• Manage health workers—both those recruited, deployed, and appointed by the County Public Service Board and those supported by partners.</li> <li>• Develop a county framework for secondment of staff.</li> <li>• Develop a county framework and budget for community health volunteers.</li> <li>• Collaborate with the national government in implementing and strengthening the county skills/capacity building program.</li> <li>• Place and pay interns (e.g., medical officers, pharmacists, dentists, clinical officers, nurses) and postgraduates.</li> </ul>	<ul style="list-style-type: none"> <li>• Establish national coordination mechanism to harmonize HRH policies and frameworks and to progressively fill the gaps in collaboration with the Public Service Commission and county governments (e.g., retention package for hardship areas, secondment, intercounty transfer, code of regulation).</li> <li>• Define HRH competency and staffing norms at all levels.</li> <li>• Develop a national framework for community health volunteers (including employment, remuneration, etc.)</li> <li>• Conduct training needs assessment and share the results with local partners and county governments.</li> <li>• Ensure equity in basic training of health workers across counties.</li> <li>• Place and pay interns (e.g., medical officers, pharmacists, dentists, clinical officers, nurses) and postgraduates.</li> </ul>

Source: MOH, 2017

## Health Workforce

The shortage of HRH in the public sector has featured prominently in public discourse on the state of Kenya's health system. Health goals and strategic plans at both the national and county levels consistently mention HRH as a key determinant of achieving health goals. Disparities in the availability of specialists (gynaecologists, internists, surgeons, etc.) across counties means that Kenyans living in marginalized counties are more likely to experience catastrophic health expenditure and to suffer disability or even death due to lack of access to specialized services. Although human resources account for the bulk of health expenditure across all counties (see Module 3), the shortage of medical staff remains a significant factor limiting access to healthcare. Kenya's aggregate medical staffing ratio<sup>7</sup> of 13:10,000 (WHO, 2006) is well below the desired minimum of 41:10,000 based on the International Labour Organization system of estimating the minimum number of health workers required to achieve the Sustainable Development Goals (SDGs) (WHO, 2010).

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<sup>7</sup> Aggregate medical staffing ratio refers to the number of medical doctors, nurses and midwives per 10,000 population

## Distribution of personnel

Data on the distribution of health workers in Kenya's public sector is available on the integrated Human Resource Information System (iHRIS). The data is updated by county HRH officers. Most counties use iHRIS data for HRH planning. However, iHRIS statistics may not accurately reflect the current distribution of medical personnel, as country updates are not conducted on a timely basis.

The Kenya economic survey provides HRH data for both the private and public sectors. Based on data from this survey (see Table 5.2), the number of health workers has increased significantly since devolution, rising from 118,340 in 2013 to 160,749 in 2017. This increase spanned all cadres. However, the availability of health workers remains below norms recommended by the WHO. For instance, WHO recommends a ratio of one doctor per every 1,000 population, while Kenya has only 0.21 doctors per 1,000 population.

**Table 5.2. Overall Number of Health Workers in the Public Sector**

Cadre	2013				2017			
	Public	Private	Total	Per 1,000 population	Public	Private	Total	Per 1,000 population
Clinical officers	3,432	9,784	13,216	0.32	3,783	14,976	18,759	0.41
Dentists	438	607	1,045	0.03	628	578	1,206	0.03
Doctors	2,828	5,854	8,682	0.21	2,776	8,145	10,921	0.24
Health records and information	615	229	844	0.02	1,261	-	-	-
Laboratory staff	2,100	2,324	4,424	0.11	3,194	6,128	9,322	0.20
Nursing staff	22,411	44,210	66,621	1.59	25,934	53,373	79,307	1.72
Nutritionists	458	38	496	0.01	831	6,065	6,896	0.15
Pharmacists	1,248	7,158	8,406	0.2	1,900	10,831	12,731	0.27
Physiotherapists	484	-	-	0	1,063	-	-	-
Public health officers	5,197	9,409	14,606	0.35	5,335	16,272	21,607	0.47
<b>Total</b>	<b>3,9211</b>	<b>79,613</b>	<b>11,8340</b>	<b>2.84</b>	<b>46,705</b>	<b>114,044</b>	<b>160,749</b>	<b>3.49</b>

Source: iHRIS analysis, July 2017

Table 5.3 shows the number of workers at each public sector facility level.<sup>8</sup> Approximately 43 percent of the health workforce is deployed in secondary referral facilities (Level 4), while 31 percent is working in primary care facilities (Levels 2 and 3). The fourth health sector strategic plan (KHSSP IV, 2014–2018) (MOH, 2016) seeks to reverse this trend by focusing its investments on primary care (Levels 2 and 3), where preventive and promotive services are offered. Anecdotal accounts indicate that county health systems are making positive

<sup>8</sup> The health system is currently organized based on six levels of care: community units (Level 1), dispensaries and health centers (Levels 2 and 3), primary referral hospitals (Level 4), secondary hospitals (Level 5), and tertiary hospitals (Level 6). See Module 4 for additional detail.

strides in this area, with most counties increasing their workforce at the primary care level over the last five years.

**Table 5.3. Public Sector Health Workforce by Level of Care**

Public Sector Facility	Number of Workers				
	2013	2014	2015	2016	2017
Level 2	5,737	6,100	7,155	8,555	8,632
Level 3	6,083	6,695	7,505	8,746	8,717
Level 4	21,724	22,522	23,511	24,573	23,696
Level 5	6,599	6,741	7,255	7,162	6,834
Level 6	818	813	772	754	663
Not Classified	297	307	322	297	274
Administration and Training	5,448	5,517	6,053	6,762	6,045
<b>Total</b>	<b>46,706</b>	<b>48,695</b>	<b>52,573</b>	<b>56,849</b>	<b>54,861</b>

Source: iHRIS analysis, July 2017

Currently, there is no mechanism or regulation in place that requires the private sector to report on their human resources. Private sector HRH data is not included in the iHRIS, nor is there any alternative formal database of private sector workforce information.

## Human Resources Policy and Regulation

### *Policy*

In Kenya, the Public Service Commission and the MOH are responsible for developing human resources policies for use in the public health sector. These policies are adapted and implemented by county public service boards across the 47 counties. Examples include performance appraisal system tools, job descriptions, and gender policy. FBOs (e.g., Christian Health Association Kenya) have also created policies and guidelines to ensure that human resources practices are standardized in all their affiliate facilities. The MOH has created an online portal where all HRH policies are stored, to facilitate better access by counties and health workers. Because health workers form the largest number of county workers, at least 40 counties have created HRH units in their health departments to ensure better management of devolved HRH functions. Headed by the HRH Manager/Officer, these units are responsible for handling human resource issues for health workers, as well as for sensitizing health workers and leadership on all new health policies and regulations.

### *Regulation*

Salaries and other benefits in the public health sector are regulated by the Salaries and Remuneration Commission, one of the independent commissions established by the 2010 constitution. The commission is mandated to set and regularly review the remuneration and benefits of all state officers and to advise national and county governments on the remuneration and benefits of all other public officers (ROK, 2010, Article 230). Health professionals are regulated by various bodies: Kenya Medical Practitioners and Dentists Board, Public Health Officers and Technicians Council, Clinical Officers Council, Kenya Nutritionists and Dietetics Institute, Health Information Council, Laboratory Technicians

and Technologists Board, Nursing Council of Kenya, Pharmacy and Poisons Board, and Physiotherapy Council of Kenya. These bodies are responsible for providing guidance on the standard of pre-service training, service delivery and professional code of practice, and development of policy guidelines for each cadre of health workers (see Table 2.3 for additional details on health sector regulatory bodies).

### **Health Professions Oversight Authority**

Key informants indicate that health workers (largely doctors, nurses, and clinical officers) feel that county governments lack the necessary competencies to provide effective oversight for HRH. Specific examples cited as affecting their perception of county governments' competence include the failure of county government to provide requisite working environments, lack of promotions, and lack of access to further training. To address these shortcomings, health workers have strongly advocated for a Health Professions Oversight Authority. In June 2016, parliament passed the *Kenya Health Act* (ROK, 2017), which created the Health Professions Oversight Authority, which is responsible for carrying out the following functions:

1. Promote and regulate inter-professional liaison between statutory regulatory bodies including joint inspections
2. Receive and facilitate the resolution of complaints from patients, aggrieved parties and regulatory bodies
3. Monitor the execution of respective mandates and functions of regulatory bodies
4. Ensure the necessary standards for health professionals are not compromised by the regulatory bodies.

The Health Professions Oversight Authority has yet to be established, as it requires funding from the national treasury to make it operational. While creation of the authority is a big win for health professionals, it is likely to attract opposition from county governments. The authority is perceived as retrogressive in terms of devolution, as it would take significant HRH responsibilities away from county governments.

### **Health Sector Human Resources Strategy, 2014–2018**

The *Kenya Health Sector Human Resources Strategy, 2014–2018* recognizes HRH as crucial driver to attaining the goals outlined in the *Kenya Health Policy, 2014–2030* (MOH, 2014a) and KHSSP IV (MOH, 2016). The strategy envisions 6 key outcomes:

1. Adequate and equitably distributed health workforce
2. Conducive environment that attracts and retains the health workforce
3. Responsive institutional framework that support workforce performance management
4. Responsive human resources development systems and practices
5. Strengthened human resource planning in human resources development
6. Adequate financial resources mobilized for support investment in HRH

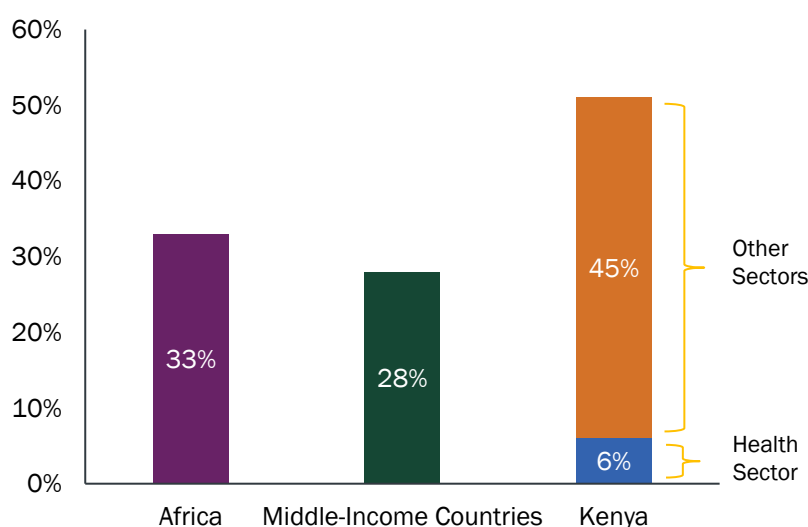
At the time this assessment was conducted, eight counties had developed HRH strategic plans to provide a roadmap on HRH priorities and interventions and support advocacy for resource allocation towards HRH financing.

## HRH Financing

### Overview of HRH financing landscape

At 12 percent of GDP, Kenya's public wage bill is above average for Africa (9.5 percent) and for middle-income economies (10 percent). The size of the public wage bill curtails Kenya's capacity to foster GDP growth (ICPAK, 2017). Kenya spends the bulk of its revenues on the public wage bill—a staggering 51 percent compared with the Africa regional average (33 percent) and the average for middle-income countries (28 percent). Health sector wages alone constituted 6 percent of Kenya's tax revenue.

Figure 5.1. Public Wage Bill as a Percentage of Tax Revenue

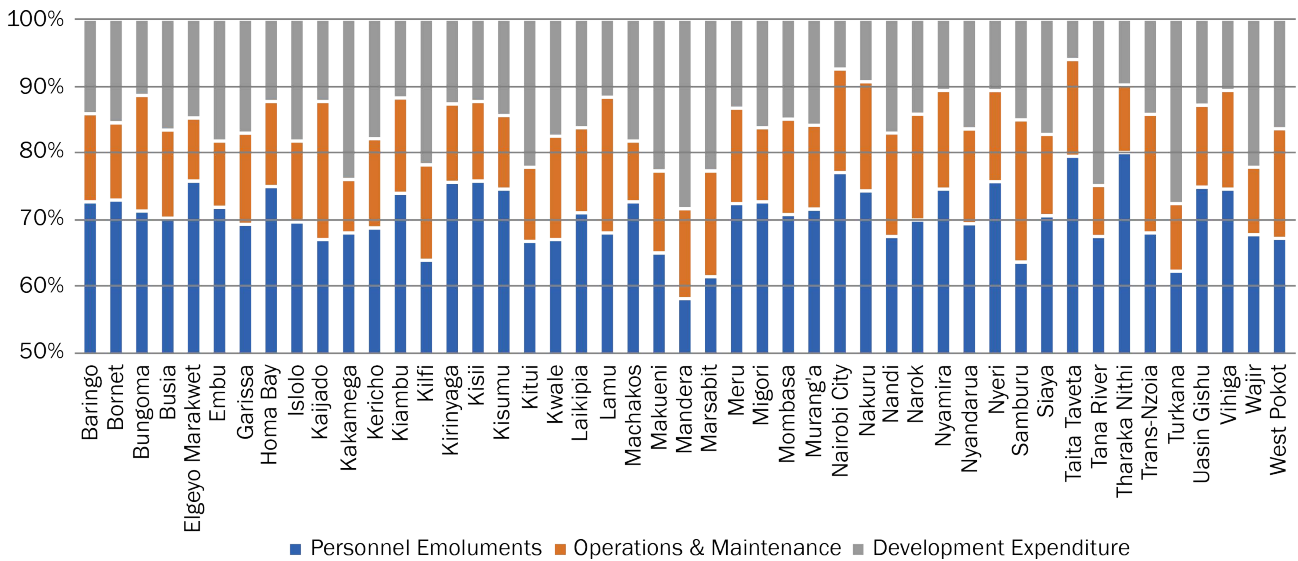


Source: HP+ analysis

At the county level, personnel emoluments constitute a significant portion of county government expenditure (see Figure 5.2). Emoluments are more prevalent in counties, such as Nairobi, Kisumu, Mombasa, Nyeri, and Nakuru, that inherited staff from local authorities. Although the *County Governments Act* (ROK, 2012, Art 25, 1b) requires counties to keep their wage bill below 35 percent of total expenditure, in FY 2016/17, these counties, among others, spent more than half of their total expenditure on wages. Failure to comply with this law can be attributed to irregular recruitment and violation of guidelines on job grading, salaries, and payment of sitting allowances, among other things (National Treasury, 2018). Over the last three financial years, wages have consistently constituted more than 70 percent of counties' recurrent health budget allocation (MOH, 2017) (see Figure 5.3).

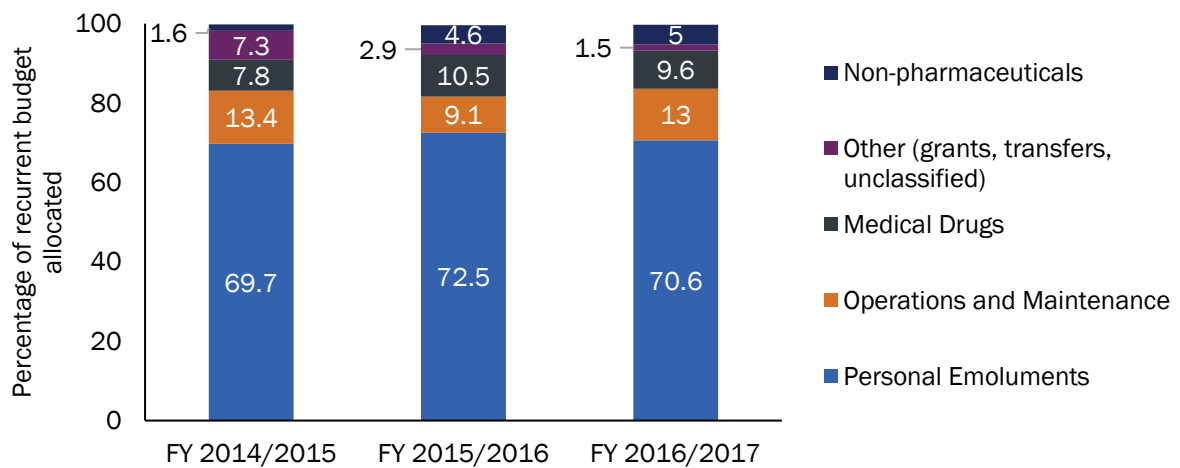
Approximately 58 percent of the HRH workforce is tied to hospitals (Levels 4 and 5), while only 35 percent of the workforce is involved in providing primary care. The health system faces mounting pressure to increase wages and allowances for existing staff, as demonstrated by the numerous industrial disputes that have taken place over the last five years.

Figure 5.2. County Expenditures by Economic Classification



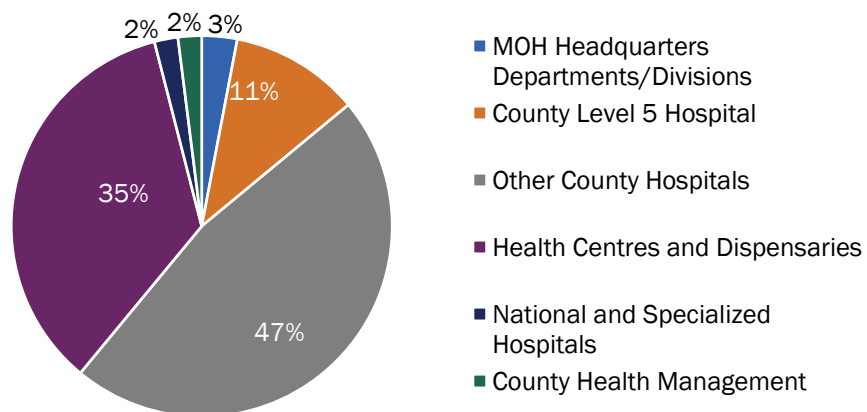
Source: National Treasury, 2018

Figure 5.3. County Government's Recurrent Budget



Source: HP+ analysis

Figure 5.4. Workforce Profile by Facility Type



Source: HP+ analysis

County governments are faced with a dilemma: on one hand, they need to address the unsustainable wage bill flowing out of HRH; on the other hand, they are under pressure to address staffing shortfalls by employing additional staff. Counties could resolve this dilemma by making the tough decision to freeze employment and by becoming more efficient. Addressing absenteeism could be one way to improve efficiency. In 2012, for example, the rate of absenteeism in health facilities was 29.2 percent and 12 percent of staff were absent without supervisors' permission. Counties have also worked to ensure that all staff on the payroll are actually working, thereby addressing the burden of "ghost workers," who continue to contribute to heavy wage bills.

### **Partnerships**

A number of private corporate, development partners, and NGOs have partnered with the MOH and county governments to provide financial support for health worker compensation and medical training. USAID, for example, has supported salaries and wages for nurses, clinical officers, health records officers, and lab technologists under the HRH Capacity Kenya and HRH Capacity Bridge projects. Between 2009 and 2015, 2,754 health workers were contracted by partners in the public sector to support HIV services at the county level. As counties' capacity has grown, counties have been able to absorb 1,562 of these staff into the government payroll (analysis conducted by the HRH Kenya Mechanism [2016–2021], IntraHealth Kenya). Currently, there are about 10,000 health workers contracted by partners to provide health services in the public sector. Most of these staff are employed to support partner-funded vertical programs such as HIV.

Other partners are supporting education by providing seed capital in the revolving Afya Elimu Fund, which provides training fees to needy students for medical training, focusing on the mid-level cadres (e.g., as nurses, laboratory technicians, and clinical officers) that constitute the bulk of Kenya's health workforce (Afya Elimu, n.d.). As of September 2017, the fund had raised Ksh 811,653,216, of which only Ksh 14,960,000 were generated from the private sector. For the fund to be sustainable, more private corporations and county governments will need to join.

The fund has 12,574 beneficiaries [6,516 females and 6,058 males] spread across 103 medical training colleges; 45 percent of beneficiaries were training to be nurses, 22 percent clinical officers, 8 percent public health officers, and 6 percent laboratory technologists. Students' progression and completion rate was outstanding (99 percent).

**Table 5.4. Afya Elimu Funds Mobilized**

Funding source	Amount (Ksh)	Total students supported
Government of Kenya [Higher Education Loans Board-HELB/MOH]	501,443,216	8,743
USAID [The FUNZO Kenya and HRH Kenya projects]	289,250,000	3,551
Private Sector [I&M Bank, Family Group Foundation, Rattansi Educational Trust, IntraHealth, Standard Chartered Bank, and a private contributor]	14,960,000	280
County Governments [Kakamega]	6,000,000	TBD
Total	811,653,216	12,574

Source: HRH Kenya Mechanism (2016–2021) program analysis, IntraHealth Kenya

The World Bank and the Beyond Zero Foundation<sup>9</sup> have also partnered to establish a scholarship program that aims to reduce maternal mortality by increasing the number of primary health workers. Currently, the program supports 400 students from arid and semi-arid areas to train as nurses at the Kenya Medical Training College.

## Human Resource Management

### *HRH information systems*

Kenya's public service utilizes several systems to carry out human resource management functions and reporting, including the iHRIS, the Regulatory Human Resource Information System, the Government Human Resource Information System, the District Health Information System and the Integrated Payroll Processing Database. iHRIS is a free, global, open-source, web-based human resource software developed for the MOH. iHRIS is a management tool that human resource managers and officers can use in HRH planning and decision making, including decisions on recruitment, deployment, training, and promotions. Through partner support, the ministry has trained over 900 HRH officers and managers on iHRIS utilization to improve maintenance of HRH data and generate accurate reports for decision making. Although, currently none of these HRH systems are interoperable (see Module 6 for a discussion on interoperability), the MOH is working with partners to enable interoperability and create linkages between different HRH systems and regulatory databases. For example, linking health worker data to regulatory bodies ensures that training is linked to the award of continuous professional development points and to license renewal.

Data is most useful for informed decision making when it is of high quality. Discussions with key informants, as well as desk reviews, revealed that the quality of county-level HRH data is not consistent across different data platforms. Failure to regularly update data, due to factors such as lack of staff and training, has contributed to data inconsistencies. While some counties have made good progress and update data regularly, others have lagged behind, continuing to rely on paper-based data and failing to regularly update iHRIS, despite staff having been trained in use of the system.

### *Performance management*

Both levels of government have taken up some form of performance contracting, an accountability mechanism that outlines clear sets of deliverables to be achieved within certain timelines (mostly within a fiscal year). These deliverables are usually drawn from health sector plans and priorities. At the national level, for example, the Minister of Health signs performance contracts with senior directors, who are expected to cascade them to lower levels of management for implementation. County governments have adopted a similar approach. However, performance contracting has not flowed to all levels. One challenge cited by respondents was difficulty linking deliverables to existing performance management systems, such as the performance appraisal system provided by the Public Service Commission. Lack of clear job descriptions—a crucial input into the system—was also mentioned as a barrier to implementation at county level. Supportive supervision is being carried out by counties and FBOs, but not on a quarterly basis as prescribed in the devolved *Devolved Human Resource Management Policy Guidelines: On Human Resources for Health* (MOH, 2015). Supportive supervision is central to providing ongoing performance support and coaching and addressing issues that hinder effective HRH

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<sup>9</sup> Beyond Zero is an initiative of Kenya's First Lady, Margaret Kenyatta, that seeks to address maternal and child mortality through mobile clinics and other programs.



management and service delivery. The HRH management policy includes a tool to facilitate supportive supervision at the national and county levels—the HRH Service Quality Assessment Supervision Checklist (MOH, 2015, pp.34–53). In some counties, this is hampered by lack of resources for conducting regular supervision (see Module 2 for additional discussion of performance management in relation to enforcement of standards).

## **Recruitment**

Recruitment of health workers is the responsibility of county public service boards, in accordance with the *County Governments Act* (ROK, 2012). Recruitment is guided by the Public Service Commission’s County Human Resource manual and MOH recruitment and deployment guidelines (Public Service Commission of Kenya, 2013). Compliance with these guidelines promotes transparency, equal opportunity, representation of all regions, and gender balance in the recruitment process. Since their establishment in 2013, counties have invested in the recruitment of medical officers, nurses, clinical officers, laboratory technologists, pharmacist, dentists, nutritionists, health records information officers, radiographers, and a few specialists. Due to the shortage of health workers, counties are also partnering with donors/implementing partners to contract health workers and investing in community health workers as a cost-effective measure to support service delivery by enhancing promotive and preventive health. The lack of guidelines on hiring temporary staff (casuals) in compliance with the *Employment Act* of 2007 (ROK, 2007) is a key concern, hindering the recruitment of casual workers in public health facilities.

## **HRH Coordination**

According to respondents at the national and county levels, partners have been instrumental in HRH coordination. Following the devolution of Kenya’s health sector in 2013 and commitments made during the third global HRH forum in Brazil (3rd Global HRH Conference, 2013, Recife Brazil), the national HRH-Interagency Coordination Committee was decentralized, generating nine intercounty HRH stakeholders’ coordination forums, which operate on the same principles as the national committee. The forums, which are chaired by county departments of health, meet quarterly to deliberate on HRH issues, validate and disseminate policies, receive outcomes of the national coordination committee’s meetings, and share the county-level forums’ deliberations with the national coordination committee. Currently, only seven of the nine intercounty coordination forums (Lake Basin, Western, Nairobi metropolitan, North Rift Valley, South Rift Valley, Coast and Central/Upper Eastern Clusters) are active, mainly due to the availability of donor support for committee meetings.

HRH coordination has been instrumental in transforming the HRH agenda into action: expediting the development, customization, and dissemination of policies—especially at county level; enabling national HRH officers to mentor/coach their county counterparts to provide required stewardship at subnational levels; fostering sustainability of HRH interventions, including the government’s stewardship in hosting, coordinating, and managing the meetings themselves; hosting national HRH conferences in 2011 and four HRH workshops for chief officers of health since 2014; and providing vibrant and effective collaborative platforms for stakeholders to resolve HRH challenges and harmonize HRH practices countrywide.

## Human Resource Development

Capacity building in the health sector remains a national government function, in accordance with schedule 4 of the 2010 constitution. Under the devolved health management system, the MOH retains responsibility for pre-service education and in-service training for health workers, with counties playing a lead role in employing the trained workforce in the public sector. In 2016, the MOH developed and disseminated a national training policy (MOH, 2016a) to provide a framework for the management of training in the health sector. The policy seeks to ensure that the management of training is standardized, and that uniform procedures and practices are followed in health sector training. To support implementation of the training policy, the MOH has established a mechanism for coordination of training through the national human resource development technical working groups that link to inter-county HRH technical working groups.

### *Pre-service training*

Pre-service training for the health workforce is regulated by professional bodies (see “Regulation” section above) and carried out by a mix of public and private institutions, of which the Kenya Medical Training College is the most dominant. The college, which has a network of 67 campuses in 43 of Kenya’s 47 counties, is responsible for training approximately 90 percent of Kenya’s health workforce, with an annual output of over 6,000 health workers across different cadres (MOH, 2016a). In 2013, seven public and three private universities trained 710 doctors, 207 pharmacists, and 70 dentists (MOH, 2016a). These numbers have continued to grow with the establishment of additional medical schools. Some of the newer public universities offering medical training include Maseno, Kenyatta, and Egerton universities. Private universities such as Kabarak University; University of Eastern Africa, Baraton; and Mount Kenya University have also become active in the pre-service training market. Other cadres of health workers trained at the undergraduate and postgraduate levels include nurses, clinical officers, and nutritionists.

### *In-service training*

In-service training is performed by the MOH and NGOs and remains largely unregulated. In-service trainings are often ad hoc and carried out without standardized curricula. No statutory provision regulates in-service trainings for the health workforce (MOH, 2016). The bulk of in-service trainings are supported by development partners to meet specific project needs, mainly in vertical programs such as HIV, tuberculosis, malaria, family planning, and maternal and child health. These programs are well funded in comparison with programs such as noncommunicable diseases, where fewer in-service trainings are available. Discussions at intergovernmental forums over the last five years suggest that the national government has performed poorly in building county capacity, as well as in coordinating existing capacity building initiatives. County leadership interviewed for this assessment complained that staff are frequently taken away from their duty stations to attend trainings and questioned the utility and value of these trainings.

Since the start of devolution, both the national government and county governments have made efforts to provide postgraduate opportunities to expand access to specialized services. However, there is limited availability of data on postgraduate training supported by the MOH or by county governments.

***Curricula***

Continuing professional development is a requirement for practice license renewal, as well as for retention in practitioner registers. A national continuing professional development regulatory framework exists under the coordination of the MOH Department of Quality Assurance, Standards, and Regulation. The regulatory framework provides guidance and coordination toward a comprehensive continuing professional development system for all health workers, with a focus on national priorities. The regulatory framework also outlines the roles and responsibilities of regulatory bodies, professional associations, the MOH's Human Resource Development Unit, and continuing professional development providers. The system has resulted in an increase in the number of health workers taking continuing professional development and renewing their licenses.

## Key Findings and Recommendations: HRH

Key Findings	Recommendations
MOH and county capacity to manage industrial unrest is weak.	<ul style="list-style-type: none"> <li>Build capacity within senior leadership at both levels of government on the politics of industrial relations, conflict management, and negotiation skills.</li> </ul>
Kenya lacks a national HRH capacity-building program to support counties	<ul style="list-style-type: none"> <li>In consultation with counties, develop a standardized HRH capacity-building program that is linked to overall health system priorities.</li> </ul>
<p>There remains a scarcity of health specialists and available specialists are unevenly distributed across counties, leading to inequities in the quality and availability of specialized health services, particularly in northern counties.</p> <p>The availability of specialized services is affected by challenges with referral systems, in combination with the scarcity of health specialists (see Module 4, “Referral System” section).</p>	<ul style="list-style-type: none"> <li>Explore incentives to attract specialists and the use of conditional grants from national government to deploy specialized staff—particularly in underserved counties.</li> <li>Engage counties through the HSIF to share specialists</li> <li>Encourage patient compliance to referral strategy to make the best use of available specialists (see Module 4, “Referral System” section).</li> </ul>
Evidence-based decision making and management of HRH is hampered by inconsistent utilization of iHRIS and a lack of interoperability across HRH-related information systems.	<ul style="list-style-type: none"> <li>Consider the use of conditional grants to incentivize counties to update iHRIS.</li> <li>Fast-track interoperability of existing health information system platforms to fully optimize iHRIS.</li> </ul>
The health system’s HRH planning capacity is hampered by the lack of private sector data, which hinder the government’s ability to ensure adherence/compliance with standards.	<ul style="list-style-type: none"> <li>Implement the provision of the Health Act, 2017 that requires private providers to report HRH data to the national government.</li> <li>Engage with the private sector to determine how best to incentivize and capture HRH data.</li> <li>Foster linkages between the public and private sectors to meet HRH goals.</li> </ul>
There is a lack of clarity on the role of the newly established Health Professions Oversight Authority.	<ul style="list-style-type: none"> <li>Disseminate the Health Act, 2017 and raise awareness of the mandate and responsibilities of the new authority (see Module 2, “Regulatory bodies” section).</li> <li>Continue discussions with county governments to generate additional buy-in/support for the new authority.</li> </ul>
Country wage bills are growing to unsustainable levels and county governments are subject to conflicting demands—on the one hand, to reduce the HRH wage bill; on the other hand, to address staffing shortfalls).	<ul style="list-style-type: none"> <li>Enforce healthy public wage bill to government spending ratios (i.e., the County Governments Act requires that counties keep their wage bill below 35 percent of total expenditure).</li> <li>Continue to explore ways to increase efficiency and promote staff productivity (including ways to reduce absenteeism, improve job satisfaction, reduce turnover, and making appropriate use of available HRH—e.g., see above recommendations related to specialists and referral systems).</li> </ul>
Slow uptake of partner-supported contract staff by county governments.	<ul style="list-style-type: none"> <li>Counties should prioritize uptake of partner-supported staff into government payroll (while recognizing the challenge that growing wage bills pose for counties).</li> </ul>

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## 6. Health Management Information System

The health management information system (HMIS) collects data from the health and other sectors—converting it into relevant information to support evidence-based decision making. The HMIS seeks to ensure the overall quality, relevance, and timeliness of data for decision making. A well-functioning HMIS is an indicator of a well-developed health system. This module provides an overview of key structures, findings, and recommendations related to the HMIS in Kenya.

### HMIS Policy, Resources, and Management

Policies and governance are key pillars that provide the legal, and regulatory environment to support HMIS functions. They are an expression of the health sector’s commitment to improving health information products and services as a tool for monitoring implementation of health sector goals.

Kenya’s health sector has numerous program-specific/disease-based monitoring and evaluation (M&E) systems. However, these systems operate separately, not sharing data and information with each other. Most of these M&E systems satisfy the reporting needs of funding agencies and implementing partners, but seldom meet the information needs of the government or the health sector as a whole. Many large-scale data collection efforts, such as household or facility surveys, are conducted to bridge the gap that would be filled by a robust routine HMIS.

The absence of a unified approach to monitoring programmatic and sector performance has created duplication of effort; inefficiencies; lagging capacity in the analysis of health sector performance and implementation of a comprehensive HMIS /M&E system; and a weak culture of data demand and the use of information for decision making (MOH, 2014).

To address these challenges, the health sector has made various commitments to strengthening the HMIS, as outlined in health sector policies, standards, and guidelines. These commitments include standardization of data collection through the development of a health sector indicator reference manual, establishment of a unique patient identifier as envisaged in the *Kenya National eHealth Policy, 2016–2030* (MOH DivMHERDI, 2016), development of a health sector M&E framework, and ongoing capacity development on HMIS and M&E. HSA interviews conducted in March 2017 found a lack of adequate monitoring of implementation of these standards and commitments, as well as a need to update policy documents, some of which were overdue for review.

Leadership of the HMIS rests with the MOH’s Division of Monitoring and Evaluation, Health Research Development, and Informatics (DivMEHRDI). The MOH conducted an HMIS institutional assessment in 2012 (MOH, 2013), which noted that the ministry has set a direction for strengthening the HMIS through the development of the *HIS Policy, 2014–2030* (MOH, 2014a) and the *HIS Strategic Plan, 2014–2018* (MOH, 2015).<sup>10</sup> Other documents reviewed during this assessment concurred that there is an agreed upon direction for strengthening Kenya’s HMIS. A wide range of stakeholders play a role in Kenya’s HMIS, including donors, private sector service providers (NGOs, FBOs, and private for-profit

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<sup>10</sup> The HIS policy and strategic plan were initially developed in 2010/2011 and revised in 2014 to bring them into alignment with the devolved government structure.

facilities), and counties, which have increased HMIS responsibilities under the 2010 constitution (ROK, 2010).

Aligning the activities of all these stakeholders with the policy direction set by the MOH will require effective coordination and leadership. While a national HMIS coordination mechanism, the Health Information Systems Interagency Coordinating Committee (HISICC), has been established, it is not yet functioning as planned. As a result, stakeholder activities are not fully aligned with the new policy and strategic plan. Because of the number and variety of stakeholders involved in Kenya's HMIS, the HISICC's lack of full functionality is a major leadership gap. Additionally, as the national government can no longer impose HMIS requirements on counties, counties must be motivated to follow national policies and guidelines voluntarily. The HISICC has a vital role to play in bridging the gap between national and county levels and motivating counties to follow HMIS policies and guidelines established by the MOH. The HISICC needs to be institutionalized, with the national government continuing to provide leadership. Moreover, there is a need to replicate the HISICC at county level, where HMIS coordination structures are currently not standardized and are lacking overall.

### **Devolution and HMIS**

Health information is mostly derived from service delivery units. As a result, the collection and onward transmission of this data to the national level is now a county function, whereas prior to devolution (see Module 2 for a wider discussion on devolution), this function was coordinated by the national-level HMIS unit. The HIS policy, initially developed in 2010, was revised in 2014 to bring it into alignment with the devolved government structure and provide a policy framework for HMIS strengthening efforts during the 2014–2030 period (MOH, 2014a). The policy provides a vision for the HMIS imperatives outlined in the *Kenya Health Policy, 2014–2030* (MOH, 2014b). It envisages Kenya having a robust national HMIS that is able to provide information on population growth, births, marriages, mortality and morbidity, disease outbreaks, social determinants of health (such as nutrition, environment, and oral health), access to and coverage of quality services, financing, HRH, and other health issues. The HIS strategic plan, which provides a medium-term operational plan for implementation of the HIS policy, was also revised in 2014 (MOH, 2015).

Despite the progress achieved in developing the key HMIS policy documents outlined above, implementation of HMIS policies and plans at county level remains a challenge. Once the national level builds counties' capacity to implement these policies, dialogue with counties will be needed to agree on implementation modalities. Some documents and guidelines have not been consistently implemented at county level. For example, some counties have institutionalized the health sector M&E framework and guidelines and the data quality assurance protocol, while others have not. Counties that are allocated funding to implement HMIS strengthening appear to be more focused on implementation of HMIS policy documents and guidelines than counties that have not received such funding.

### **HMIS management**

As described above, the national HMIS has been centrally managed by the DivMEHRDI, which is headed by a divisional head who manages a national secretariat composed of about 24 staff based in the MOH headquarters in Nairobi. The division has five units: eHealth, M&E, research and development, civil registration and vital statistics, and HMIS. The HMIS unit needs additional staff, mainly statisticians/data analysts and epidemiologists. The data management function at the county and sub-county levels is carried out by county and sub-county health records and information officers. The sub-county health records and

information officer reports to the county health records and information officer, who in turn reports to the county director of health. The county and sub-county levels are also short on statistical analysts and epidemiologists, making data analysis and interpretation of findings for local consumption a challenge.

Operationalization of the national HMIS included adoption of the master facility list as the de facto facility inventory tool, revision of this list in 2015 to make it responsive to the needs introduced by devolution, adoption of DHIS2 (District Health Information System 2) as the national aggregate reporting tool, and development of the Kenya health enterprise architecture—a blueprint for HMIS that sets the stage for development and deployment of interoperable HMIS applications.

Another notable achievement is development of the health sector data services layer, which provides an interoperability platform through which data from various systems can be shared. As a result, it is now possible to overlay data from the master facility list, DHIS2, the iHRIS, and the Kenya Medical Supplies Authority Enterprise Resource Planning System. The ability to query and overlay data from multiple sources improves the quality of information available for decision makers. The goal is to enhance the data services layer to enable other priority applications to share data through this layer.

Implementation of key HMIS policies and guiding documents at all levels remains inadequate. At the same time, the review process has yet to begin for some policy documents, for which the process should already have begun if the policies are to be finalized before their performance period expires. These policy documents include the *HIS Strategic Plan, 2014–2018* (MOH, 2015), *Performance Review and Reporting Guidelines* (MOH, 2014c), the *Health Sector Monitoring and Evaluation Framework, 2014–2018* (MOH, 2014), and the *Kenya National eHealth Policy, 2016–2030* (MOH DivMHERDI, 2016). Without strong leadership from government to ensure compliance and adherence to HMIS policies and strategies, both within government and by nongovernmental stakeholders, parallel systems and agendas will continue to undermine coordination and resource use and weaken Kenya's HMIS. Some of the policy documents, including the *Kenya Health Sector Enterprise Architecture* (MOH, 2015a), need to be unpacked in language that allows them to be understood and used by non-technical users, such as health managers at the county level.

### **Health information implications of the Health Act**

There is a pressing need to develop a HMIS legal and regulatory framework to address issues such as enforcement of private sector reporting, which is almost non-existent. Although a significant portion of the population seek health services from private facilities, these facilities are not included in existing reporting systems (see Module 4 for discussion of public and private sector service delivery). As a result, national routine data are not fully representative. Passage of the *Kenya Health Act* in July 2017 (ROK, 2017) was the first step toward establishing a legal and regulatory framework for the HMIS. The Act includes broad statements on the need for compliance with reporting. As a result, an opportunity now exists for the enactment of detailed legislation to ensure implementation of these aspirational statements and enforce reporting from all service delivery units, including private facilities. The Health Act also calls for the development of specific legislation to address various ehealth-related issues, such as data privacy and confidentiality, interoperability, telemedicine, mhealth, and e-waste disposal. While some of these issues are factored into existing policy documents and guidelines, others, such as waste disposal, will need to be developed from scratch.



## **HMIS resources**

The MOH faces challenges, including shortages of and inappropriate skill mix among technical staff, inadequate budgetary allocations, and insufficient infrastructure, which make it difficult to create and maintain a strong HMIS at the national and county levels.

Uncoordinated leadership in data management because of parallel disease-specific reporting systems<sup>11</sup> also greatly affects the completeness, accuracy, and timeliness of data, because the already inadequate staff are overburdened by data collection needs (MOH, 2014d).

Human resources to support HMIS continue to be inadequate. Capacity building efforts for existing HMIS staff are largely donor-supported and not uniformly available countrywide. Without adequate resourcing of HMIS operations, particularly the provision of adequate human resources with requisite skills, especially at the data generation level, implementation of HMIS policies and strategies will be negatively affected.

Human resources issues impact service delivery as well as M&E and the HMIS. As reported during the interviews, because healthcare providers are also responsible for capturing patient data and tabulating, tallying, summarizing, and collating these data on a daily, weekly, and monthly basis for submission to the DHIS, providers' time is split between essential client care and reporting responsibilities. In many instances, these data summaries are based on recollections rather than being completed on the same day, or even in the same week, that the services were provided.

Budgetary allocations for HMIS functions are inadequate at both national and county levels (MOH, 2015). In some instances, allocations for HMIS only support core functions, such as the printing/photocopying of data collection tools.

Government commitment can be difficult to discern but is typically manifested in concrete expressions of support, such as a funded budget line or staff commensurate with the scale of the effort. Government commitment is often brought about by national champions who enlist the support of others (MOH, 2012). As yet, the Government of Kenya has not demonstrated the level of commitment needed to establish a strong national HMIS. While the policy framework has been in place for a strengthened HMIS since 2010, its implementation has lagged due in part to the lack of government commitment. An indicator of this lack of commitment is the fact that, although the provision of adequate health information for evidence-based decision making is one of seven major health policy orientations, the division—DivMEHRDI—responsible for its implementation is dependent on donor resources for its basic functioning. To ensure that the Division can carry out its role and functions, the MOH must provide political and management support commensurate with expectations.

Around 10 percent of the health budget has been proposed for HMIS and M&E in the HIS Policy, 2014–2018, but this target has yet to be adopted by the government. In 2012 and 2013, the DivMEHRDI received almost a zero budget from government, leaving it fully reliant on donor funding. This is an indication of the relatively low priority that the government has given to HMIS. Even donor funding for HMIS is largely fragmented and

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<sup>11</sup> These systems include TIBU for tuberculosis reporting, the KEMSA Enterprise Resource Planning system for commodity data, viral load database for HIV lab data, and electronic medical records systems for patient level data.

driven by disease-specific programs. This has promoted the establishment of disease-specific parallel reporting systems, which further weaken the national reporting system.

## Reporting Systems

### *Facility-based health statistics*

Routine health data is collected in standardized registers at each facility where healthcare services are delivered. Every month, the staff at primary care facilities collate the data into paper-based summary forms and send these to the sub-county health records and information officer. The officer enters the monthly summaries into the web-based DHIS2 system. Larger facilities, such as referral hospitals and sub-county hospitals, have information and communication technology infrastructure and dedicated facility health records officers who enter facility data into the DHIS2 system directly. Once entered onto DHIS2, data are accessible to anyone with access credentials. At the time of this health system assessment, all public facilities were reporting data through DHIS2. Uniform and blanket access to and availability of DHIS2 as the de facto aggregate reporting system is an indicator of the HMIS's progress towards maturity. Capacity for access and generation of various reports remains a challenge and was largely limited to health records and information officers and facility managers.

Some facilities use electronic medical records systems for patient management and data collection. However, in most health facilities, electronic medical records are only found in comprehensive care centers that offer HIV services. In some facilities, summary forms are automatically generated and data are manually entered into DHIS2, while some facility systems are supposedly interoperable, allowing data to be automatically pushed into DHIS2. This interoperability had not yet been tested at the time of this assessment.

The preliminary findings of the Mid-Term Review of the current Kenya Health Sector Strategic Plan show great promise regarding the national adoption of DHIS2 as the aggregate reporting tool. The preliminary report states that, for most indicators, there was a wealth of data available (MOH, 2016). This was due to DHIS2, which functions well, with high reporting rates (over 90 percent) and consistent data sets. This shows great improvement since the 2010 HSA, in which reporting rates averaged 77 percent. Challenges remain, however, as some data sets had very low reporting rates. For example, reporting rates for the community health strategy datasets average 30–50 percent (MOH, 2014e). This is in part attributable to reduced donor funding for these services. HIV care and treatment services, which are hugely donor funded, register the highest reporting rates (95–99 percent). During stakeholder interviews for this assessment, participants reported that the completeness and accuracy of some of the datasets in DHIS2 remain wanting.

The availability of data collection tools at all service delivery units continues to be a big challenge. The DivMEHRDI is no longer mandated to produce, print, and distribute tools to counties. Counties, on the other hand, did not budget for the production and distribution of these tools in the last two financial years, leading to massive shortages of the tools in a number of service delivery units. This led to an urgent solicitation of funds from development partners in late 2015 to support the printing and distribution of a one-year supply of tools as counties make allocations for future supplies. While this stopgap measure was useful and timely, these stocks are running out and there are indications that some counties may be in a similar situation again in a few months. These lapses have promoted improvisation, such as the use of exercise books and re-use of printed paper, which negatively impact the accuracy of the data collected.

### ***Data collection, data quality, and access***

The demand for data to support informed planning and management decision-making at different levels is being driven by the national health sector strategic planning process and periodic review of its performance through annual workplans and the performance management system at the national level. This demand for data at the sector level is in line with the data needed to manage the health function—health statistics, management, and population surveys managed by the Ministry of Planning, National Development and Vision 2030, which prepares national annual progress reports.

DHIS2 has been embraced as the national aggregate reporting system. However, systems and resources, such as data collection tools, standard operating procedures, trained personnel, need to be in place to ensure that the data entered is of high quality. Previous assessments have found registers to be incomplete and often not filled out at the time of service, tally sheets not filled out correctly, and other issues across the board (MOH, 2014e).

### ***Census and vital statistics***

Kenya carries out a national census every 10 years. A national census was last carried out in 2009. It is estimated that Kenya's vital registration system captures only about half of all births and deaths. 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, which are then delivered to the sub-county registration officer at least once a month. At the community level, the community health worker or area Chief will record births and deaths and report this information to the community health extension worker and/or catchment area facility.

Community-based registration relies on local registration agents, who are not sufficiently supported or held accountable for registering all events. Existing civil registration services are inadequate to reach clients to provide registration and certification of events or to supervise local registration agents. Civil registration services are manual and inefficient, resulting in unsuccessful or time-consuming search and retrieval, duplicate registrations, and unreliable vital statistics. It is also not clearly mandated how cause of death statistics should flow, or who is responsible for compiling, analysing, and disseminating the official statistics. Vital statistics reported by the civil registration department in annual vital statistics reports are not consistent due to poor data quality in civil registration office monthly summary reports, lack of verification and correction of statistics reported by the office, and failure to explain or otherwise point out inconsistent numbers in the annual report. Further, KNBS vital statistics are not harmonized with those reported by the civil registration department. As a result, although there are valid explanations for some differences,—late registrations, for example—the consumer is left uninformed and with little confidence in the statistics (MEASURE Evaluation, 2013).

Civil registration department reports provide statistics on vital events (births and deaths). The health sector annual performance and statistical reports rely greatly on routine information without much reference or a clear linkage to the civil registration and vital statistics system. The recent establishment of the civil registration and vital statistics unit within the DivMEHRDI is a good step towards improving the linkage with the civil registration department and, consequently, increasing the reference and use of civil registration and vital statistics in health sector performance review and reporting.

## Surveys

Routine reporting is supplemented by various surveys, including the KDHS, which collects information on core variables related to maternal and child health and family planning and includes questions related to maternal mortality, women's status, domestic violence, female genital cutting, fistula, male circumcision, tobacco use, and HIV testing. The findings of the 2014 KDHS (KNBS, et al., 2015) informed development of the KHSSP.

The Kenya Malaria Indicator Survey was implemented in 2007, 2010, and 2015. The 2015 survey (National Malaria Control Programme, 2016) provided recommendations for case management for malaria in pregnancy and children and informed the National Malaria Control Programme's programmatic interventions.

The Kenya AIDS Indicator Survey (KAIS) was fielded in 2007 and 2012. The KAIS was used as a baseline for development of the *Kenya National AIDS Strategic Plan 2009/10–2012/13*. The KAIS includes measurement of HIV, HSV-2, and syphilis infection, as well as CD4 levels of people living with HIV (NACC, 2012)

The Kenya Household Health Expenditure and Utilisation Survey (KHHEUS) explores information on health seeking behaviour, the utilization of health services, health spending, and health insurance coverage amongst Kenyan households. The survey has been conducted three times (in 2003, 2007, and 2013). The 2013 KHHEUS (report published in 2015) (MOH, 2015b) collected information on healthcare seeking behaviour, health expenditures, and other common household expenditures and was one source of data for Kenya's fourth round of National Health Accounts, published in 2015 (MOH, Forthcoming).

A service availability readiness and mapping survey was carried out in 2014 to identify the services offered in various facilities in the wake of devolution (MOH, 2016). The report was useful to both the national and county levels in determining readiness for service delivery.

## Surveillance

The demographic surveillance system (IDSR) is managed by the Division of Disease Surveillance and Response within the Department of Disease Control. On a weekly basis, health facilities are required to submit a standardized IDSR Weekly Epidemic Monitoring Form to the sub-county medical officer of health. The form captures data related to a range of epidemic prone diseases, such as malaria, cholera, typhoid, and measles, acute flaccid paralysis, and neonatal tetanus.

Kenya's demographic surveillance system consists of five sites located 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 international classification of diseases version 10 (ICD- 10) coding. In addition to the five demographic surveillance system sites, program-specific surveillance systems are also in place. The NASCOP directs an HIV surveillance system with approximately 44 sites across the country. The surveillance system is supported by PEPFAR through the Centers for Disease Control and Prevention (CDC) in the areas of tool standardization, quality assurance, and data management and analysis. With CDC support, NASCOP also carries out cohort analysis with a patient-level data warehouse that currently stores records for close to one million patients from various comprehensive care centers countrywide. These data are useful in carrying out analysis on

the county's implementation of the Joint United Nations Programme on HIV/AIDS (UNAIDS) 90-90-90 strategy for HIV care and treatment.

A stepwise approach to risk factor surveillance (STEPS) survey was carried out in 2016 to document Kenya's progress in relation to the KHSSP risk factor indicators. This survey was a crucial data source for the mid-term review of the KHSSP. Although routine data collection is relatively structured in Kenya, there is a lack of mechanisms for the collection of risk factor data.

### ***Facility assessments***

Service availability and readiness assessment mapping and a mini service availability and readiness assessment mapping were conducted in 2013 and 2016, respectively (MOH, 2016). These assessments provide, by county, a comprehensive mapping of health services, capacity for service provision, sector investments, and readiness to provide services. The outputs from these assessments are useful for defining county and national government strategic direction in the medium term, guiding transfer of health assets to the counties, and informing future efforts to measure and track progress in expanding KEPH services provision and investments as Kenya moves towards universal KEPH coverage. These reports were instrumental in guiding assets distribution to various counties in the wake of devolution, as well as in assessing the country's progress towards achieving capacity for implementation of KEPH services as outlined in the sector strategic plan.

While the structures for non-routine data collection have continued to be strengthened, access to some of this data by the DivMEHRDI remains wanting and linkage between routine and non-routine data collection is weak. As a result, health sector performance remains overly reliant on routine data, which makes data a less potent tool for planning and decision making.

## **Data Products**

The production of high-quality data that lead to useful health information and knowledge products—and to the access, analysis, and use of these products—lies at the heart of evidence-based planning, policy formulation, decision making, and action. To be useful for planning and decision making, reliable information needs to be made available in the right format at the right time. This assessment found that demand for information and knowledge products for analysis, learning, planning, and decision-making remains low at all levels of the health system.

### ***Information products and dissemination***

The DivMEHRDI produces and disseminates various information products, including the annual health sector performance review report and the annual health sector statistical report, on an annual basis. The annual health sector performance review report highlights the sector's performance against various targets for each financial year established in the KHSSP and annual workplans. The review highlights progress, challenges, and lessons learnt and proposes ways of moving the sector towards achievement of KHSSP targets at the national and county levels. While a national report is developed that gives a high-level county view picture, counties also develop county specific annual health sector performance reports, which reflect the counties' performance in various health system building blocks vis a vis the targets outlined in the county health sector strategic plan and annual workplans. These reports are disseminated through various channels, including the annual health congress. The annual statistical report provides statistical analysis on a diverse range of

health-related data that are important for healthcare planning and programming. The information contained in the report is derived principally from the sub-county health information software—the web-based system through which facilities manage and transmit their data. Some data are derived from other sources, including disease surveillance sites, the community, and the ministry’s national programs. These data, which are usually presented after detailed analysis and aggregation, are useful for planning and decision making at all levels of the health system.

In addition to products produced by the MOH, health information is produced and disseminated by national programs and by other sector partners and stakeholders. NASCOP produces yearly and quarterly M&E reports and the NACC coordinates production of HIV sector reports, such as the annual Joint HIV/AIDS Program Review and the annual Kenya AIDS Response Report. The NASCOP website’s “Knowledge Centre” and the NACC website’s “Reports and Statistics” page facilitate access to and dissemination of HIV information products, including the Kenya National AIDS Strategic Plan; survey, surveillance, and trend reports; prevention, treatment, and care guidelines; and HIV facts and FAQs. Similarly, the website of the National Malaria Control Programme includes a “Resource Centre” with malaria FAQs and downloadable documents, such as the Kenya National Malaria Strategy, the National Malaria M&E Plan, the Malaria Program Performance Review, survey reports, and implementation guidelines. The National Malaria Control Programme disseminates these and other products, such as a quarterly newsletter, during county-level review meetings. KNBS produces a variety of information products, including reports on health and demographic surveys. However, there is no standardized approach to analysing and presenting data that is used in the development of these information products. Different approaches are used by different programs and levels of the health system. As a result, comparability of data across units (e.g., counties or programs) is a challenge and, at the same time, identifying data sources is limited to the knowledge of the person manipulating the data. There is need to standardize data analysis and presentation processes through the development of a data analytics framework.

### ***Data demand and use***

Data dissemination and use seem to be weak, especially for the routine data collected by the HMIS. Although DHIS2 was acclaimed to be providing almost all the information needed for routine decision making, respondents expressed concerns about the quality of the data, especially for certain datasets, including the number of patients cumulatively on HIV care and treatment. The lack of confidence in the quality of DHIS2 constitutes a barrier to data use. The HSA survey team found the Annual Health Sector Statistics Report was largely not in use at the subnational level, often as a result of either not receiving the report or receiving it late. The health sector annual performance report was found to be well known and utilized at the national level but not uniformly at county level.

Counties were producing annual county health sector performance reports, which are disseminated during annual stakeholder forums held in most counties. While some counties are ahead of the pack in analysing their data and developing information products, such as performance reports, the utilization of these reports was found to be largely limited to monitoring county performance against county health sector strategic plans. The utility of performance reports in guiding programmatic decisions at county level could not be ascertained. Stakeholders reported that, in most cases, plans cannot be translated into effective actions because they usually are not linked to the underlying information from the HMIS. There is very little allocation of resources for publication and dissemination of periodic reports, let alone investment in information generation, analysis, and creation of

knowledge management products that would facilitate learning and sharing of experiences and best practices. During KHSSP II, little effort has been made in carrying out evaluations and operational research, other than an end-term review. However, there is renewed effort to improve in this area, as demonstrated by the mid-term review of the KHSSP and the development of a health research agenda. DivMEHRDI has been organized to include a health sector M&E unit responsible for sector M&E and a research unit charged with developing and providing oversight for the implementation of a health sector research agenda.

Information generation, knowledge capture, and knowledge use remains weak and underdeveloped at all levels. To trigger a shift and strengthen the demand for information, serious efforts must be made to strengthen capacity at all levels through coaching and mentorship on data demand and use, data analysis, and generation of information products. If the goal of a healthy Kenyan population is to be realized, HMIS data must be readily available and accessible, both to inform beneficiaries about available services and to inform planning, management, and decision making. Reliable digital and paper-based information products and other knowledge-based goods need to be readily available and accessible across the board. Therefore, capacity needs to be built at all levels in conducting data analysis and using information products. Spatial analysis of data through geographic information systems (GIS) was found to be in use in some counties. Although GIS products have tremendous potential to aid decision making, especially in monitoring trends, use of GIS is still limited. Some counties stood out as trend setters in data analytics and use. However, forums for sharing best practices are limited, with the annual health congress/summit as the major cross county sharing forum.

## Key Findings and Recommendations: HMIS

Health System Gap	Recommendation
<b>Leadership</b>	
The HMIS is weakened by the lack of effective coordination and leadership. Although the HSICC was established, it is not yet functioning as planned—a significant challenge given the HSICC’s role in bridging the gap between national and county levels and motivating counties to follow HMIS policies and guidelines established by the MOH.	Institutionalize the HSICC, with the national government continuing to provide leadership.
At county level, HMIS coordination structures are currently not standardized and are lacking overall.	Replicate the HSICC at county level.
<b>Policies</b>	
There is a pressing need to establish a robust legal and regulatory framework for the HMIS. Although passage of the Health Act was the first step, there remains a need to enact detailed legislation to operationalize the measure. The act calls for the development of specific legislation to address various ehealth-related issues, such as data privacy and confidentiality, interoperability, telemedicine, mhealth, and e-waste disposal.	Continue strengthening the HMIS legal and regulatory framework, including developing detailed legislation to ensure implementation of the Health Act and enforce reporting from all service delivery units, including private facilities.
Implementation of key HMIS policies and guiding documents at all levels remains inadequate, as does monitoring of the implementation of the HMIS policy and other key policy documents.	Develop and implement M&E plans for all key HMIS policy documents to ensure that their implementation is being monitored.
HMIS budgets are limited at all levels and Kenya’s HMIS often relies on donor resources.	Advocate for the Government of Kenya to provide adequate budget support for HMIS at all levels.
<b>Systems</b>	
DHIS2 has been rolled out countrywide and is widely accepted as the aggregate reporting system. However, its use is limited by data-quality concerns.	Institutionalize DHIS2 data quality assurance measures at all levels.
Electronic medical records are mostly found in comprehensive care centers that offer HIV services.	Expand electronic medical records to cover all priority service points in health facilities.
The <i>eHealth policy, 2016–2030</i> prioritizes the establishment of a unique patient id as a tool to promote system interoperability.	Develop a unique patient identifier.
<b>Products</b>	
There is a lack of a systematic and standard approach to data analysis.	Develop and implement a data analysis framework to promote data analysis at all levels.
Capacity for data analysis remains weak at all levels.	Conduct continuous capacity building on data analysis and the generation and use of data analytic products, including GIS, for government staff at all levels.



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## 7. Medical Products, Vaccines, and Technologies

### Introduction

Access to high-quality and cost-effective medical products and technologies is essential for a well-functioning health system and, ultimately, the attainment of the highest possible standard of health by all. However, ensuring access to essential medicines is a challenge. Pharmaceutical expenditure is rising in Kenya, as is overall health expenditure, due to an epidemiological transition from infectious to noncommunicable conditions, which has resulted in a double disease burden (see Module 4). This growing demand in service provision necessitates a robust medical supplies and technologies management system governed by a strong regulatory framework that is efficient in procurement, management, and equitable distribution of affordable medicines.

Efficient organization of pharmaceuticals and other medical products is essential to meeting health system goals. Health systems often have difficulty achieving their goals because they have not addressed how the medicines essential to saving lives and improving health will be procured, supplied, and used. Shortages of essential medicines and resources wasted on unnecessary or low-quality medicines compromises service delivery. Pharmaceutical management is a set of activities aimed at ensuring the timely availability and appropriate use of safe, effective, quality medicines and related products and services in any health care setting. In Kenya, there is a growing need for efficient procurement, management, and distribution of medicines at the county level.

### Structure of the Medical Products Management System

The *Kenya Health Policy, 2014–2030* (MOH, 2014) calls for the establishment of an effective and reliable procurement and supply system that leverages public and private investments to advance patient access to essential health products and technologies and deliver value-for-money across the system. Given the devolution of health services and the significant role the private sector plays in procurement and distribution, the structure and systems of medical products management have become quite complex. The roles played by key institutions and organizations are summarized in Table 7.1.

**Table 7.1. Role of Key Institutions and Organizations in Medical Products Management**

Sector	Institution/ Organization	Role
Public	Pharmaceutical Services Unit, MOH	The Pharmaceutical Services Unit is a unit of the MOH and is charged with the responsibility of sector-wide pharmaceutical policy development and oversight of policy implementation, capacity building, and provision of technical assistance to counties and the development of norms and standards. However, the oversight role of the Pharmaceutical Services Unit at the county level has not yet taken root due to resource constraints and a prevailing mistrust between county- and national-level institutions (MSH, 2016).

Sector	Institution/ Organization	Role
Public	Priority Health Programs	The key national priority health programs include the National AIDS and STI Control Program (NASCOP), the National Malaria Control Program, and the Reproductive and Maternal Health Services Unit. NASCOP undertakes national level planning and management of HIV commodities such as antiretrovirals, opportunistic infection drugs, and test kits. The National Malaria Control Program, on the other hand, coordinates planning and procurement of malaria commodities including rapid diagnostic test kits while the Reproductive and Maternal Health Services Unit oversees the planning for family planning commodities. All three priority health programs have a national commodity security technical working group responsible for diverse aspects of commodity management, including forecasting and quantification, commodity data quality review, resource mobilization and development of training programs for commodity management.
Public	County Health Directorates	County health directorates, through the office of County Chief Pharmacist, are responsible for the coordination of pharmaceutical services, including the planning and management of health commodities at the county level. Key roles undertaken include forecasting and quantification, budgeting, advocating and lobbying the county assembly for requisite funds and management of the entire commodity supply chain from ordering, storage and issuing to dispensing and reporting. To streamline health commodity management, donors have provided technical and financial support to a number of counties to establish commodity security technical working groups and build the capacity of key staff involved in commodity management.
Public	Pharmacy and Poisons Board (PPB)	The PPB is a regulatory agency that oversees pharmacies and the pharmaceutical industry through the provisions of the <i>Pharmacy and Poisons Act, Cap 244 (ROK, 2012)</i> . The law empowers the board to implement the appropriate regulatory measures to achieve the highest standards of safety, efficacy, and quality for all drugs, chemical substances, and medical devices.
Public	Kenya Medical Supplies Authority (KEMSA)	KEMSA procures, warehouses, and distributes medical commodities to health facilities. It was established by the <i>Kenya Medical Supplies Authority Act No. 20 of 2013 (ROK, 2013)</i> , replacing the Kenya Medical Supplies Agency in response to health service devolution. Operating under a pull system, county health facilities order from and pay directly to KEMSA, while KEMSA fulfills the orders. KEMSA will also fulfill orders for external partners, including HIV commodities and test kits.
Public	MOH—Unit of Vaccine and Immunization Services	The MOH Unit of Vaccine and Immunization Services, formerly known as the Kenya Expanded Program on Immunization, is responsible for all policy and commodity management coordination for vaccines.

Sector	Institution/ Organization	Role
Private— Mission for Essential Drugs and Supplies (MEDS) and private for-profit market	Faith-based organizations: Christian Health Association of Kenya, Kenya Conference of Catholic Bishops, the Kenya Episcopal Conference (KEC), the Supreme Council of Kenya Muslims (SUPKEM), MEDS; For-Profit Private Sector	Christian Health Association of Kenya, KEC, and SUPKEM serve as umbrella bodies for the Protestant, Catholic, and Muslim faith-based health services, respectively. Christian Health Association of Kenya and KEC came together to establish MEDS, the largest procurement and distribution agent, supplying nearly all faith-based health facilities. MEDS provides products to over 2,000 faith-based and public health facilities. It also provides quality assurance and capacity building services. A large proportion of health commodities is procured and distributed through the for-profit private sector. However, this sector has limited coordination and harmonization of commodity management except through the drug registration process and licensing of health outlets.
Development Partners and United Nations (UN) agencies	U.S. Government (USAID and the CDC); WHO; Gavi, the Vaccine Alliance; and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund)	USAID plays a key part in strengthening commodity management capacity and systems at both the national and county level through the Procurement and Supply Management project. The Danish International Development Agency (DANIDA) also provides technical and financial support to the MOH Pharmaceutical Services Unit. The Global Fund supports a wide range of activities intended to strengthen health commodity management. This includes capacity building and support for commodity forecasting and quantification. WHO and GAVI support a wide range of activities for strengthening planning, procurement, and distribution of vaccines.

## Pharmaceutical Policy Framework

The MOH Pharmacy Services Unit is responsible for the development and review of pharmaceutical policies and guidelines. The department's main task is to ensure that all the drugs and medical and pharmacological products in the market comply with quality and safety requirements and standards.

In the last few years, the unit has reviewed and updated key policy guidelines, including the Kenya Essential Medicines List (KEML), Kenya Essential Medical Supplies List, and Essential Medicines and Medical supplies guidelines. The unit also developed the *Kenya National Pharmaceutical Policy* (also known as Sessional Paper No. 4 of 2012) (ROK, 2012a) to provide a framework for reforms and governance of the pharmaceutical sector.

Various policy documents have been drafted to strengthen medical products regulation, including the Kenya Government Policy on Integrated Regulation of Food, Medical Products and Health Technologies; Institutional Framework for Harmonized Regulation of Health Products and Technologies in Kenya; and the Kenya Food and Drugs Administration Bill, 2015 (MOH analysis).

## Regulatory Framework

The principal law regulating pharmaceutical practice in Kenya is the *Pharmacy and Poisons Act Cap 244* of the laws of Kenya (Cap 244), which was last revised in 2012 (ROK, 2012). Cap

244 mandates the PPB to regulate the sector, in particular the practice of pharmacy and the manufacture and trade of drugs. Cap 244 covers the following key areas:

- Establishment and management of the PPB
- Registration and regulation of pharmacy practitioners
- Licensing of pharmacies
- Licensing of manufacturing firms
- Quality assurance practices
- Advertising of pharmaceutical products

The *Dangerous Drugs Act Cap 245*, regulates the importation, exportation, manufacture, sale, and use of opium and other dangerous drugs. An overarching regulatory framework and authority have been proposed to oversee regulation of pharmaceuticals, medical devices, and food products. A number of guidelines and bills have been developed to support this overarching framework, however, they have yet to be finalized and ratified. KEMSA, the official distributor of pharmaceutical products, was established through an act of parliament—the *Kenya Medical Supplies Authority Act No. 20 of 2013* (ROK, 2013), replacing the Kenya Medical Supplies Agency. The Act changed KEMSA from an agency to an authority and conferred greater autonomy to the institution, allowing it to operate independent to the MOH.

In June 2017, Parliament enacted the *Health Act No. 21 of 2017* (ROK, 2017). The Act provides for the establishment of a regulatory body through an act of Parliament. The Health Act envisages that the body will regulate the licensing, manufacturing, laboratory testing and inspection, contractors, advertising and promotion, and post marketing surveillance for quality safety and disposal of health products and technologies (ROK, 2017, 62,63). The Health Act further reinforces KEMSA’s role by listing it as the first point of call for the procurement of health products and technologies at the county referral level. It also further expands KEMSA’s mandate to include procurement of therapeutic feeds and nutritional formulations. (ROK, 2017, 64, 2,3). Finally, the Act makes a provision for the establishment of a regulatory body on the practice of traditional and alternative health practices. The body shall set the minimum standards of practice and licensing for traditional medicine and alternative medicine (ROK, 2017, 74,75). However, the Health Act has not been disseminated and, therefore, the proposals on the new regulatory bodies and mechanisms have not been fully instituted.

### ***Medicines Regulatory Authority***

The PPB, based in Nairobi, serves as the country’s medicines regulator. The board derives its power from the *Pharmacy and Poisons Act Cap 244*. The board is chaired by the director of medical services and the chief pharmacist serves as the registrar. Table 7.2 shows the key functions of PPB.

**Table 7.2. Function Areas of the Pharmacy and Poisons Board**

Function Area	Key Activities
Drug Registration	<ul style="list-style-type: none"> <li>• Reviewing drug registration submissions</li> <li>• Registering drugs and renewals</li> <li>• Registering complementary medicines, medical devices, and food supplements</li> <li>• Pharmacovigilance</li> <li>• Regulating clinical trials</li> </ul>
Pharmacy Practice Regulation	<ul style="list-style-type: none"> <li>• Conducting registration exams</li> <li>• Registering pharmacy practitioners</li> <li>• Annual re-licensing of practitioners</li> <li>• Licensing of training institutions and approval of curricula</li> </ul>
Manufacturing Services	<ul style="list-style-type: none"> <li>• Good manufacturing practice inspections</li> <li>• Licensing manufacturers</li> </ul>
Inspectorate services	<ul style="list-style-type: none"> <li>• Inspecting pharmacies</li> <li>• Inspecting production sites</li> <li>• Conducting market surveillance and controlling counterfeits</li> </ul>

Source: ROK, 2014

### ***Intellectual property-related issues***

Trade-Related Aspects of Intellectual Property Rights (TRIPS) is an international agreement administered by the World Trade Organization that sets down standards for forms of intellectual property that member nations should apply in order to provide strong protection to global intellectual property rights.

Many developing country governments are concerned that TRIPS agreements, especially on patents, are prohibitive and protect foreign firms, especially in advanced industrial fields such as biotechnology. These governments are concerned that TRIPS agreements benefit foreign businesses and inhibit the capacity of domestic firms' to be innovative and further enhance inventions. This disagreement has made foreign companies reluctant to invest in countries where their technology might be copied with no profitable compensation.

Developing countries have made strides correcting the imbalance that favors developed countries. In December 2005, the World Trade Organization Council permanently adopted a key policy on compulsory licenses that had existed as a waiver since 2003. The policy has significantly improved the ability of developing countries without manufacturing capabilities to import patented drugs from sources other than the originator company (Eiss et al., 2007). This has increased access of key medicines such as antiretroviral drugs (ARVs) at lower costs, thereby increasing coverage. TRIPs have introduced flexibilities that allow countries to adjust intellectual property laws to take into account national interests, such as those facing high HIV burden countries in sub-Saharan Africa. These flexibilities include early entry of generics and voluntary and compulsory licensing for manufacture and governmental use.

The *Kenya Industrial Property Act 2001, Cap 509 (ROK, 2001)* makes a provision for parallel importation of patented products. However, challenges and disputes remain between parallel importers and manufacturers regarding the legality of parallel imports,

especially when they differ from those specifically registered by the PPB, for example, with respect to country of origin, packaging, and product specifications.

### ***Product registration and marketing authorization***

The PPB has the sole mandate of registering human and veterinary pharmaceutical products, medical devices, and food supplements and issuing market authorization so that products can be sold and/or used in Kenya. The PPB has developed comprehensive product registration guidelines. Applications for registration are reviewed by technical teams, and the board tests product samples and inspects manufacturing sites before a product can be registered. The PPB has revolutionized its delivery of services by using technology, which has increased efficiency.

### ***Licensing and inspection***

#### ***Pharmacies***

The PPB has developed guidelines for good distribution practices that are used as the basis for licensing and re-licensing retail and wholesale pharmacy outlets. The board has also issued guidelines for the registration of retail and wholesale premises. Legal requirements for registration are laid out in the *Pharmacy and Poisons Act Cap 244*. The board has put in place a well-staffed, equipped and trained inspection team to ensure that premises that stock and sell pharmaceutical products adhere to regulations. The use of technology has enabled trained inspection teams to effectively enforce regulations. The board has mapped out pharmacies across the country and provided systems for conducting inspections and enforcement every quarter. Hand-held devices with short code messaging are used to confirm the registration of products in the market in order to ensure quality and safety standards to patients are maintained.

#### ***Pharmacies and pharmaceutical technologists***

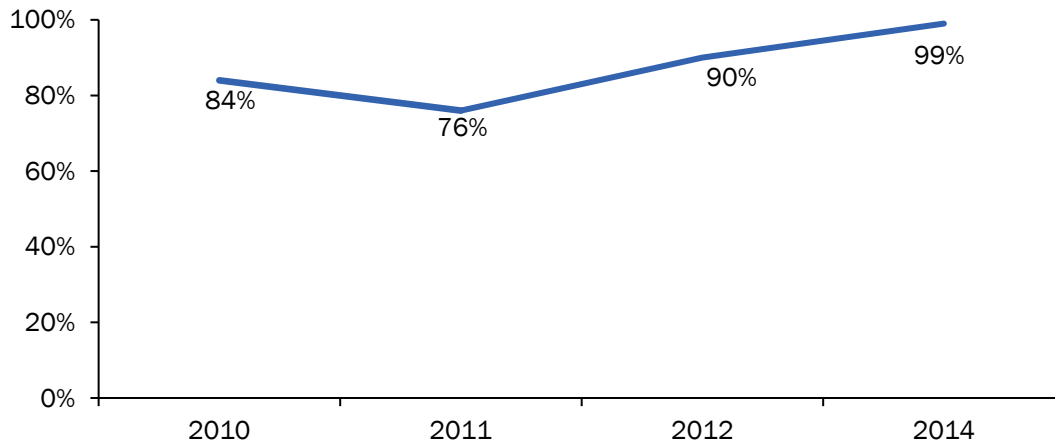
Cap 244 recognizes pharmacists and pharmaceutical technologists as the two cadres authorized to oversee the sale and dispensing of most classes of pharmaceuticals. Both cadres are required to have qualifications from accredited schools of pharmacy and sit a board exam. If they pass their exams, they are registered as either pharmacists or pharmaceutical technologists. Their licenses are renewed annually after demonstrating they have attained the required number of continuing professional development (CPD) points. The board has developed comprehensive CPD guidelines to support re-licensure and ensure that pharmacist and pharmaceutical technologist knowledge remains current. In 2013, the country had 2,202 pharmacists and 6,204 pharmaceutical technologists (KNBS, 2015). Since 2013, the PPB has approved and certified 22 more institutions to offer pharmaceutical diploma courses.

#### ***Quality control***

A number of national mechanisms are in place for supporting quality assurance of pharmaceutical products. The registration process ensures registered products are of high quality by evaluating manufacturing and testing procedures, testing samples, undertaking factory inspections, and ensuring manufacturers have valid good manufacturing practice certification. In addition, the board conducts regular post-market surveillance, where it randomly samples and tests products in the market. The board produces a monthly newsletter with information on cases of poor quality medicines. The PPB has also developed clear guidelines on recall of all medicines of proven or suspected poor quality. Most of the

post-marketing surveillance has focused on products where consequences of poor quality have the highest risks. These products include ARV, malaria, family planning, and TB drugs. Data from the board shows that the number of post-marketing surveillance samples that fail prescribed tests have declined, as shown in the chart below.

**Figure 7.1. Percent of Post-Marketing Surveillance Samples Passing Testing**



Source: MSH, 2016

The PPB acquired 11 low-cost portable mini-laboratories to aid rapid medicine quality verification against substandard and counterfeit medicine. These were distributed to various ports of entry within the country and are being used for routine screening of medicines. Additionally, the mini-laboratories have enabled the pre-testing of medicines; strengthened post-marketing surveillance; strengthened the capacity of the board staff to assess quality of medicines on a real time basis, with minimal resources; and allowed monitoring of storage conditions through random analysis of stored medicines, which has enabled the board to achieve significant costs savings in quality assurance.

The National Quality Control Laboratory is charged with the responsibility of providing testing of pharmaceutical products for PPB and other clients. Confirmatory tests for suspicious products from mini-laboratories and other approved analyses are conducted at the National Quality Control Laboratory, reducing the costs of analysis by the board. KEMSA and the Mission for Essential Drugs and Supplies (MEDS) also have their own well-established laboratories that test all of the products that they procure.

### ***Medicines advertising and promotion***

The PPB has established stringent guidelines to regulate the promotion of advertising of pharmaceutical products.

#### ***Guidelines for advertising and promotion of medicines and medical devices***

The guidelines are aimed at ensuring that all information communicated to health care practitioners and the general public is accurate, current, factual, and not misleading in any way. The guidelines apply to all manufacturers, wholesale dealers, and anyone wishing to advertise or promote medicines or medical devices in Kenya. The criteria are applicable to both prescription and non-prescription medicinal drugs for human or veterinary use. The guidelines also apply to traditional, herbal, and other alternative schools of medicine and any other product promoted as a medicine. These guidelines apply to all advertising and promotional materials for medicines in Kenya and to information made available to the



general public or any other interested person about medicines advertised or promoted. The objective of these guidelines is to regularize all advertisements, promotional materials, and information on medicines available in Kenya and articulate ethical criteria for medicinal drug promotion in order to support and encourage the improvement of pharmaceutical care and promote rational use of medicines. The information provided should enable healthcare professionals and patients to make rational decisions related to the use of medicines. These guidelines will be used in conjunction with *The Pharmacy and Poisons Act, Cap 244* in all aspects. These guidelines reflect the PPB's current thinking on the legal and ethical promotion of medicines (MOH, 2012).

### *Code of promotional practices for medical representatives*

It is the goal of the MOH and the PPB to provide the public and healthcare providers with accurate, fair, and objective information about medical products so rational decisions can be made as to their use. With this in mind, the PPB has adapted the International Code for Promotion of Pharmaceuticals to the Kenyan context to guide the work of pharmaceutical representatives.

The code is not intended to restrain the promotion of medicinal products in a manner that is detrimental to fair competition. It is intended to promote rational prescribing, dispensing and use by the players in healthcare systems.

These guidelines should be read in conjunction with the Report of the Sub-committee on Pharmaceutical Representatives of May 2006 (MOH, not publicly available), Pharmacy and Poisons Act, Cap 244 of 2012 and the International Federation of Pharmaceutical Manufacturers and Associations Code of Practice (IFPMA, 2012).

Ethical practices by pharmaceutical representatives are dependent on among other things, mode of their training, licensing, and Code of Promotional Practices. The code establishes the minimum academic and professional requirements for pharmaceutical representatives and the licensing methodology and Code of Promotional Practices.

The board vets all print and electronic advertisements of pharmaceutical products and registers all medical representatives.

### **Pharmacovigilance**

Pharmacovigilance as defined by WHO as “the science and activities relating to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problem, after they have been licensed for use, especially in order to identify and evaluate previously unreported adverse reactions.” The aims of pharmacovigilance is to enhance patient safety in relation to the use of medicines and to support public health programmes by providing reliable, balanced information for the effective assessment of the risk-benefit profile of medicines.

The PPB has developed pharmacovigilance guidelines and tools to support the institutionalization of pharmacovigilance at the national, county, and facility levels. The PPB has worked closely with the national and county ministries of health; priority health programs—NAS COP, the National Tuberculosis, Leprosy and Lung Disease Program, the National Malaria Control Programme, and the Reproductive and Maternal Health Services Unit as well as with various development partners to help entrench the culture and practice of pharmacovigilance. The board has developed an electronic tool for reporting adverse drug reactions and suspected poor-quality medicines. In collaboration with NAS COP and the

National Malaria Control Programme, the board has established sentinel sites that actively identify and report adverse drug reactions and suspected poor-quality medicines. The PPB has also worked with the national priority health programs to conduct cohort pharmacovigilance studies for malaria drugs and ARVs. The PPB produces and circulates a monthly status report on pharmacovigilance that is distributed to all county directors of health and county pharmacists. Kenya has the fourth highest adverse drug reactions reporting rate in Africa. PPB has also recently been appointed a regional center of excellence in pharmacovigilance by NEPAD. To address this, the University of Nairobi—School of Pharmacy has developed and is offering a master’s degree in pharmacoepidemiology and pharmacovigilance. This is the first such course in the region. By 2015, the program had graduated a total of 17 students. A number of graduates of this program are serving in key health institutions including national referral hospitals, NASCOP, the National Malaria Control Programme, and the National Tuberculosis, Leprosy and Lung Disease Program. Medicines and therapeutic committees have been established at the national, county, and facility levels to coordinate pharmacovigilance and other aspects of the rational use of medicines, including adherence to the KEML. However, with a few exceptions, the medicines and therapeutics committees are not operational (MSH, 2016). The significant impact of this program will be through pharmacists who are better placed to respond to the ever-changing healthcare market and will indirectly impact the lives of all citizens.

## Medicines and Medical Products Supply

KEMSA, MEDS, and private distributors are the main procurement agencies of pharmaceutical and nonpharmaceutical supplies and commodities. These channels procure, warehouse, and use distribution channels that serve the public, FBOs, NGOs, and the private sector. Donors fund procurement of ARVs, HIV testing kits and lab reagents, family planning commodities, tuberculosis drugs, and vaccines for the health sector, while KEMSA procures, warehouses, and distributes these products. These products are supplied free to both public and private sector providers. However, in the presence of stockouts, priority is given to public facilities, FBOs, and NGOs, while private facilities have to procure from other commercial private sources.

The private sector is a major player in the market for pharmaceutical and nonpharmaceutical manufacturing, importation, procurement, warehousing, distribution, and retailing. The pharmaceutical manufacturing industry in Kenya consists of about 30 companies accredited by the PPB. Kenya depends heavily on imported pharmaceutical products for her essential medicines needs. Local firms manufactured about 38.4 percent of products listed as essential medicines and 91 percent of products stocked at KEMSA as of December 2015 (Vugigi, S.K et al 2015) were essential medicines.

Kenya has over 2,000 registered retail pharmacy outlets and more than three times as many unregistered retail pharmacies and drug shops. About 15 percent of outpatients rely on unregistered pharmacies/chemists. Both the private sector and pharmacy/chemists account for about 33 percent of total outpatient visits. The estimated annual expenditure on sales of over-the-counter and prescription drugs is about USD 234.6 million and the total expenditure on pharmaceuticals is about US\$638 million. Interviews with stakeholders and various household surveys further corroborated that the first contact of about 90 percent of patients or consumers, when confronted with illness, was a chemist/pharmacy. Only about 15 percent of pharmacy/chemist sales are prescription drugs, meaning most pharmacies provide in-house consultations.

In 2017, the Kenya Association of Pharmaceutical Industry estimated that counterfeit medicines accounted for approximately Ksh 9 billion (US\$100 million) in sales annually, constituting 20-25 percent of the total legal commercial pharmaceutical market (MOH analysis). Counterfeit medicines pose a public health risk because some of their ingredients may be dangerous or they may lack active ingredients. Their use can result in treatment failure and contribute to increased drug resistance or even death. Unlike substandard medicines, which involve problems with the manufacturing process by a known manufacturer, counterfeit medicines are made by people with the intent to mislead for a profit.

## ***Public sector procurement***

### *National level*

Under the 2013 KEMSA Act, KEMSA transitioned from a public agency to a not-for-profit, self-sustaining, commercial business that provides pharmaceutical products to government clients, including county health facilities. KEMSA is responsible for the procurement and distribution of the bulk of pharmaceutical products and medical supplies for public sector health facilities. National referral hospitals, such as Kenyatta National Hospital and Moi Teaching and Referral Hospital, procure their own pharmaceutical products through independent tenders.

To support the transition, the government and the World Bank helped capitalize KEMSA through cash and stock injections. The World Bank gave a cash injection of Ksh 3.2 billion (FY 2014/15 to FY 2016/17) while the government gave KEMSA stock worth Ksh 4 billion (MOH, 2015). KEMSA procures public sector supplies with its own funds and counties place and pay for their orders. The only government grant KEMSA gets is for staff salaries. KEMSA also procures and distributes most donor-financed commodities, including ARVs paid for by the U.S. government (see reference to donor financing above). KEMSA levies a charge on all the partner financed commodities it handles, which is a significant part of its revenues. Refer to Annex A for details on the old and new KEMSA business models. To effectively carry out its mandate within a new constitutional dispensation KEMSA has had to restructure and adopt new ways of working.

### *County and facility level*

Under the devolved system, county departments of health have full responsibility for procurement and distribution of health commodities. KEMSA supplies medical drugs to all 47 counties based on their ability to purchase in bulk and use economies of scale. Procurement of a variety of medical stock to devolved units includes drugs for noncommunicable diseases, a request made by the counties. Since the onset of devolution, counties are responsible for ordering according to their needs and have struggled to transition from the old “push” system to the new “pull” system, as they have very limited capacity in commodity planning and budgeting.

Various partners, including USAID and the Global Fund, have worked to build counties’ commodity management capacity, especially in commodity forecasting, quantification, and budgeting. In some high disease-burden counties, USAID has helped counties establish health commodities technical working groups that support improvements in commodity management including planning, storage, record keeping, and reporting. Most counties have reported that technical working groups play a crucial advisory role for all commodities, not only pharmaceuticals. Counties procure about 70 percent of their pharmaceutical supplies through KEMSA, 28 percent through MEDS, and 2 percent through the private for-profit

market. KEMSA's order fill rate stands at 70 percent, whereas MEDS is at 98 percent and the private for-profit market is at 100 percent. For non-pharmaceuticals, counties procure about 70 percent from KEMSA, 20 percent from MEDS, and 10 percent from the private market (Situma, 2014).

Although county departments of health procure pharmaceutical and other medical supplies, they continue to face health commodity stockouts and delays in the procurement of essential supplies. Interviewees attributed stockouts to planning challenges, failure to pay KEMSA and other suppliers in a timely manner, and county referral hospitals' weak autonomy to directly procure pharmaceutical and medical supplies. Procurement delays have resulted in stockouts that compromise patient care. Hospitals have also reported an inability to maintain and repair infrastructure and equipment, which is now considered to be a county function (Barasa et al., 2017). Anecdotal accounts indicate that many counties procure outside the KEMSA or MEDS system. This exposes the county health system to risk, as the quality of the products cannot be guaranteed.

### **Public sector storage and distribution**

#### *National level*

KEMSA's main warehousing and distribution facilities are in Nairobi, but it has several regional depots. Recently, KEMSA bought its leased warehousing facility from Kenya Airways at a cost of Ksh 500 million. KEMSA lost its monopoly of supplying public health facilities, since counties are now allowed to procure commodities from other agencies. Despite the progress made so far with KEMSA procurement systems, the logistics management information system used by counties to order does not show the actual status of the order or date of delivery nor does it show when the ordering process is completed or whether the order fill rate is 100 percent. The KEMSA system does not communicate the non-availability of certain commodities. As a result, only when the delivery is released and received by the county does the county realize that all the commodities have not been supplied.

The table below gives KEMSA's baseline performance against key indicators and the targets set in its strategic plan.

**Table 7.3. KEMSA's Performance Baseline and Targets**

Indicator	Baseline (August 2014)	Mid-Term (2017) Target	End of Term (2019) Target
Annual sales revenue (Ksh billion)	5	8	12
Annual sales of services (Ksh billion)*	1.2	1.6	2
Customer satisfaction index	79.8	85	90
Order fill rate	60%	98%	98%
Order turnaround time	12 days	10 days	7days
Level of capitalization (Ksh)	8.8 billion	12 billion	14 billion
Average age of debt (days)	90 days	45 days	30 days

\*These sales are primarily fees earned by KEMSA for distributing partner financed commodities

Source: MOH, 2015

KEMSA has invested heavily in facility modernization, process improvements, and automation to strengthen its warehousing and distribution operations. In 2015, KEMSA was awarded a five-year, US\$65 million grant from USAID to procure and distribute U.S. Government-financed commodities (Jamah, 2017).

### *County and facility level*

Counties manage their own warehousing and distribution operations. Counties, however, place orders disaggregated by health facility and KEMSA dispatches commodities to each individual facility. Counties support commodity redistribution across their facilities to mitigate shortages and minimize expiration of commodities. A recent USAID evaluation revealed that counties have significant infrastructural constraints, as they lack adequate commodity storage that meets temperature and humidity requirements for most pharmaceutical commodities (MSH, 2016). The same evaluation revealed that counties face challenges with record keeping and commodity reporting. These challenges make it difficult for facilities and counties to forecast their requirements. Commodity record keeping and reporting remain largely manual, although a number of health programs, such as ART, have introduced electronic dispensing and inventory management tools.

### **Private sector procurement, storage, and distribution**

#### *Faith-based health sector*

MEDS is the principal agency involved in the procurement and distribution of health commodities for the faith-based health sector. MEDS was founded in 1986 and is jointly owned by the protestant and catholic faiths through the Christian Health Association of Kenya and the Kenya Conference of Catholic Bishops. MEDS operations are based in Nairobi. Although KEMSA is the first point of call, some public health facilities order items that may be out-of-stock at KEMSA from MEDS. MEDS also provides quality assurance and capacity building services.

MEDS currently provides a reliable supply of essential medicines and medical supplies of good quality at affordable prices to over 1,800 public and private health facilities in Kenya. Through the devolved distribution network, it delivers orders at no extra cost within East and Central Africa region.

#### *For-profit private sector*

The operations of the for-profit health private sector are highly fragmented and poorly coordinated and there is a paucity of data on the quantity and value of health commodities handled and customers supplied. The private market is characterized by high concentration, with very few distributors/wholesalers controlling the bulk of the sector that provides pharmaceutical and medical supplies to both the public and private not-for-profit sectors. The private sector controls about 10 percent of the non-pharmaceuticals market and 1 percent of the pharmaceuticals market. There are numerous informal retailers, mainly in the rural areas. Manufacturers and distributors often engage in retail practice, thereby bypassing wholesalers. Despite having an agreed-upon pricing structure with 10 percent mark-up for manufacturers, 15 percent for distributors, and 33 percent for retailers, forward integration is common among manufacturers and distributors engaging in retail activity, which has resulted in huge variations in retail prices, deterring access and resulting in large out-of-pocket expenditures. This distorts the private for-profit sector, resulting in blurred boundaries between wholesalers and retailers. Additionally, corrupt behaviors, such as

retailers acquiring substandard medicines through parallel importation and pilferage from the public sector, continue to prevail.

## Appropriate Use

### *Standard treatment guidelines*

The MOH Department of Standards, Quality Assurance, and Regulation, in collaboration with other stakeholders, is responsible for the development and review of standard treatment guidelines. The department developed a web portal to allow prescribers and other healthcare professionals to have access to standard treatment guidelines to support rational use of drugs.

### *National essential medicines list*

In 2016, Kenya developed and formally issued revised versions of the KEML and the Kenya Essential Medical Supplies List. The latter addresses non-pharmaceutical supplies including surgical supplies. The review of these lists was led by the National Medicines and Therapeutic Committee. Below is a summary of the changes made to the 2010 KEML and the totals for the 2016 KEML.

**Table 7.4. Changes Made in the 2016 KEML**

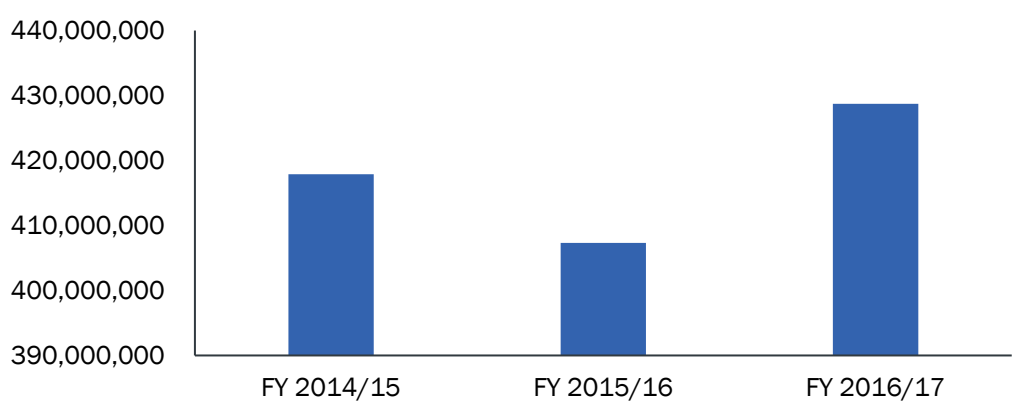
Amendments Summary	#
Deletions from KEML 2010	131
Additions to KEML 2016	337
Net increase	206
KEML 2016 Totals	#
Total number of drugs	452
Total presentations	620
Total list entries	687

In 2015, for the first time, Kenya developed the Kenya Essential Medical Laboratory Commodities List to harmonize rational procurement of laboratory commodities. These lists are also used by KEMSA to determine what products to stock. However, anecdotal evidence suggests that counties are not fully complying with the national drug lists.

## Public Sector Financing of Medical Supplies

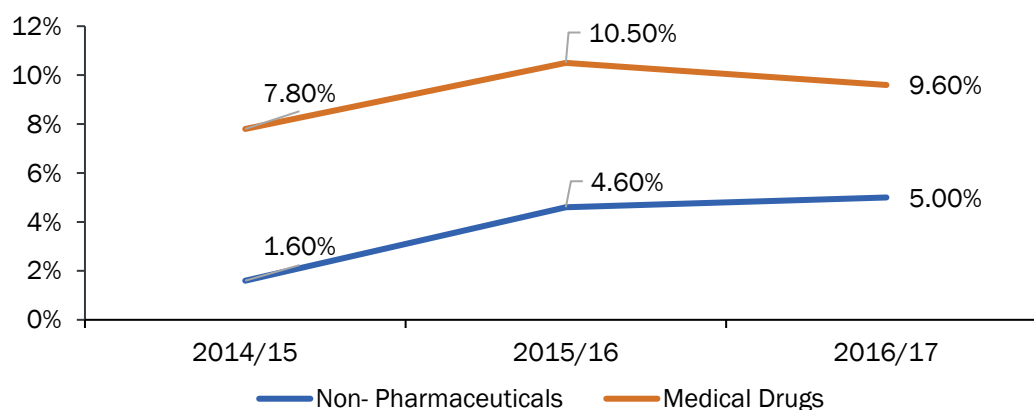
### *Total medicines and medical products expenditure*

The MOH secured an allocation of Ksh 428 million in FY 2016/17 for the procurement of specialized materials up from Ksh 407 million in FY 2015/16 (see Figure 7.2). This funding goes primarily to procuring strategic commodities, such as ARVs; malaria, tuberculosis, and family planning commodities; and vaccines. These commodities are issued to support health services delivery at county level free of charge.

**Figure 7.2. National Recurrent Budget Allocation for Specialized Materials**

Source: MOH analysis

Under the devolved system of governance, decision making on health system resource allocation has become more local. In general, counties have allocated additional resources to health, which has also contributed to an upward trend in allocation, when looking into allocation by economic categories, including non-pharmaceuticals and medical drugs. As shown in figure 7.3, the allocation trend for medical drugs, as a percent of the total health recurrent budget, increased from 7.8 percent in FY 2014/15 to 10.5 percent in FY 2015/16 before dropping to 9.6 percent in FY 2016/17. At the same time, allocation to non-pharmaceuticals reached 5 percent in FY 2016/17, up from the 1.6 percent allocated in FY 2014/15.

**Figure 7.3. County Recurrent Budget Allocation on Non-Pharmaceuticals and Medical Drugs**

Source: KEMSA data

## Key Findings and Recommendations: Medical Products, Vaccines, and Technologies

Health System Gap	Recommendation
The Health Act of 2017 proposes additional health products and technologies regulatory bodies. The Act has not been disseminated and therefore the health system policy utility of these bodies has not been appreciated or discussed.	Prioritize dissemination and implementation of Health Act of 2017.
TRIPS is creating barriers to parallel importation of patented products and therefore generating disputes between manufacturers and importers	The PPB needs to facilitate policy and legal reforms dialogue between key stakeholders to address these disputes.
A high number of unregistered pharmacies and drug shops exist.	Decentralize and expand PPB inspection and regulatory functions.
A significant number of pharmacies provide in-house consultations (well beyond their mandate).	There is need to develop guidelines to ensure that the pharmacies work within acceptable boundaries.
The number of counterfeit medicines has increased.	Increased support for inspection services to ensure better market surveillance.
Beyond KEMSA and MEDS, mechanisms to ensure the quality of county procurement of health products and technologies is weak.	The PPB needs to establish a mechanism to ensure the safety and quality of health products and technologies.
Counties are struggling to finance health products and technologies.	Support legislation to allow county facilities to retain user fees. Advocacy is required at the county level to ensure increased and sustained resources for health products and technologies.
KEMSA does not communicate the non-availability of certain commodities until they deliver commodities to the county.	Put the logistics management information system online and develop an online ordering system, so counties are able to see current inventory lists and KEMSA can provide feedback to counties quickly.



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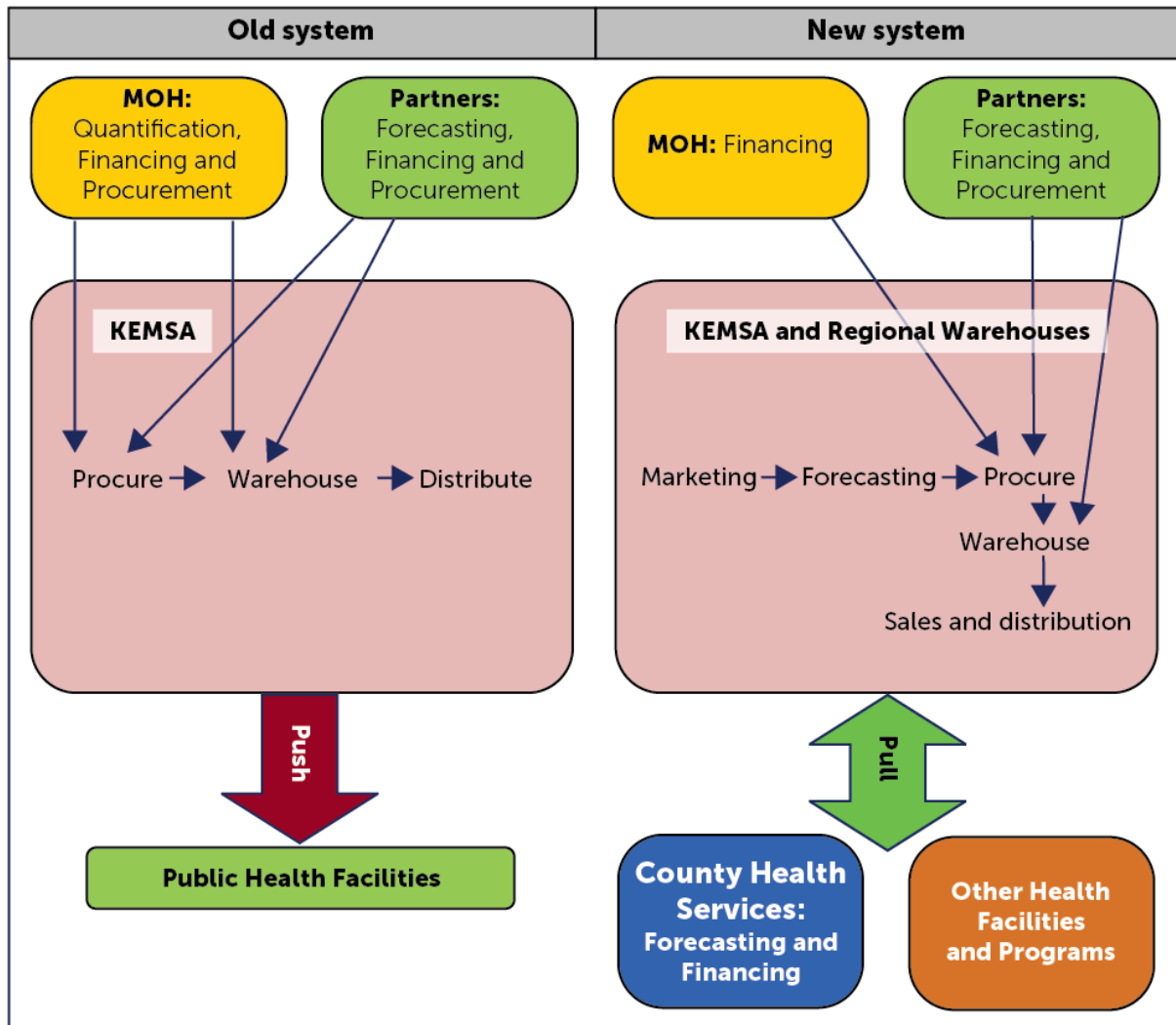
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## Annex A. KEMSA's Old and New Business Model



Source: Adapted from KEMSA Strategic Plan, 2014–2018.

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