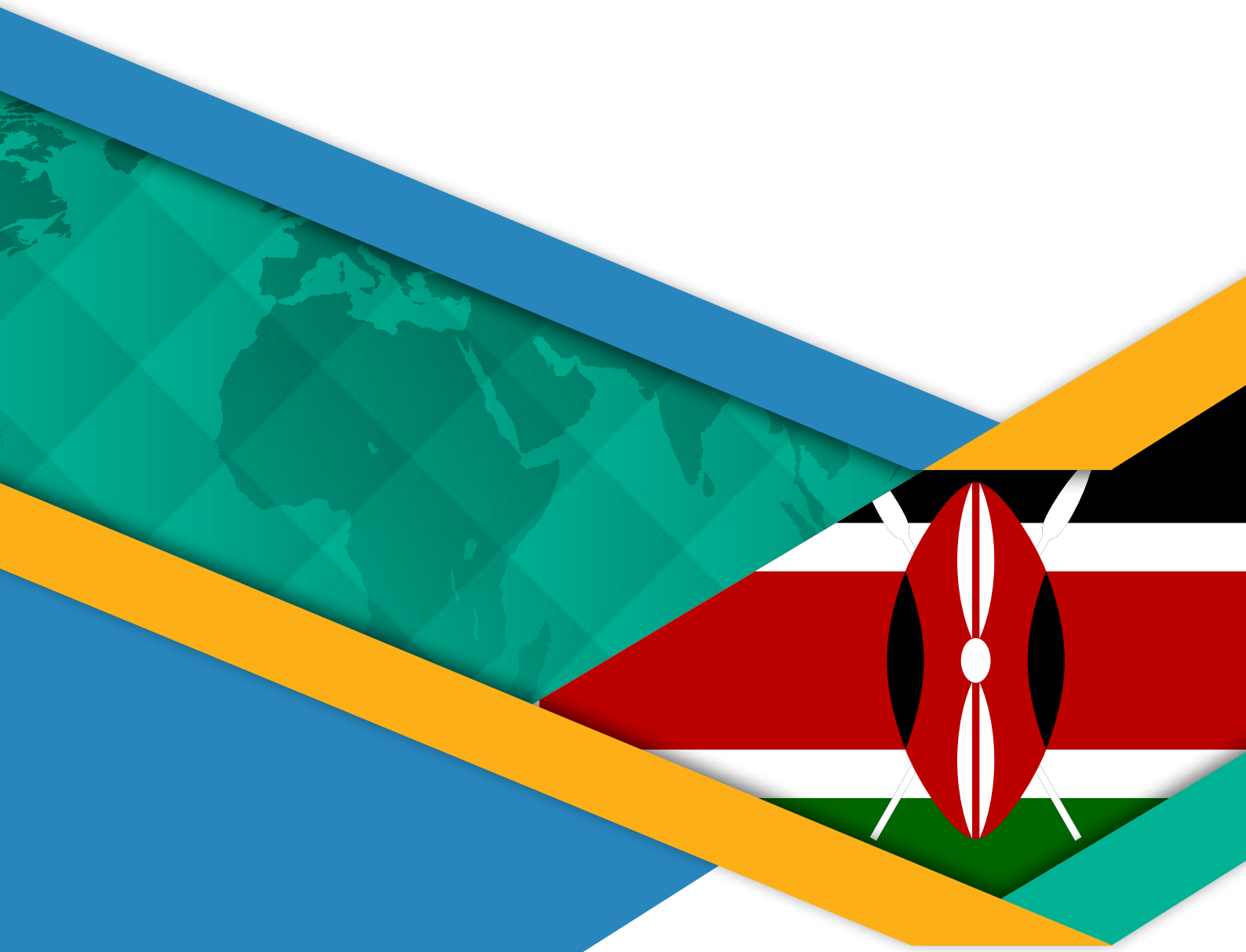


# PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

*Case study from Kenya*





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WHO/HIS/HSR/17.29

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We thank the County Health Management Teams for valuable information, including primary and community health services. The team includes Nyamira, Kilifi, Kakamega, Nyeri, Uasin Gishu and Garissa.

## Abbreviations and acronyms

<b>ACT</b>	artemisinin combination therapy	<b>NACC</b>	National AIDS Control Council
<b>CBO</b>	community-based organization	<b>NCD</b>	noncommunicable disease
<b>CHMT</b>	county health management team	<b>NCK</b>	Nursing Council of Kenya
<b>CHV</b>	community health volunteer	<b>NGO</b>	nongovernmental organization
<b>CHEW</b>	community health extension worker	<b>NHSSP</b>	Second National Health Sector Strategic Plan
<b>COC</b>	clinical officers council	<b>ORS</b>	oral rehydration salts
<b>CORP</b>	community-owned resource person	<b>PHC</b>	primary health care
<b>CPD</b>	continuous professional development	<b>PHOTC</b>	Public Health Officers and Technicians Council of Kenya
<b>DHIS-2</b>	District Health Information Software	<b>PPB</b>	Pharmacy and Poisons Board
<b>HFMC</b>	Health Facility Management Committees	<b>rHIS</b>	regulatory human resources information system
<b>EPI</b>	Expanded Programme on Immunization	<b>TB</b>	tuberculosis
<b>GDP</b>	gross domestic product	<b>SARAM</b>	Service Readiness and Availability Assessment Mapping
<b>HFMC</b>	Health Facility Management Committee	<b>TQM</b>	total quality management
<b>HIS</b>	health information system	<b>UHC</b>	universal health care coverage
<b>HRIS</b>	human resources information system	<b>UNDP</b>	United Nations Development Programme
<b>HRH</b>	human resources for health	<b>UNICEF</b>	United Nations Children's Fund
<b>iHRIS</b>	integrated human resources information system	<b>USAID</b>	United States Agency for International Development
<b>IPC</b>	infection prevention and control	<b>VCT</b>	voluntary counselling and testing
<b>KHWIS</b>	Kenya Health Workforce Information System		
<b>KMPDB</b>	Kenya Medical Practitioners and Dentistry Board		
<b>KNDI</b>	Kenya Nutritionists and Dieticians Institute		
<b>KMTC</b>	Kenya Medical Training College		
<b>M&amp;E</b>	monitoring and evaluation		
<b>MDR</b>	multidrug resistance		
<b>NASCOP</b>	National AIDS and STI Programme		



## Background to PRIMASYS case studies

Health systems around the globe still fall short of providing accessible, good-quality, comprehensive and integrated care. As the global health community is setting ambitious goals of universal health coverage and health equity in line with the 2030 Agenda for Sustainable Development, there is increasing interest in access to and utilization of primary health care in low- and middle-income countries. A wide array of stakeholders, including development agencies, global health funders, policy planners and health system decision-makers, require a better understanding of primary health care systems in order to plan and support complex health system interventions. There is thus a need to fill the knowledge gaps concerning strategic information on front-line primary health care systems at national and subnational levels in low- and middle-income settings.

The Alliance for Health Policy and Systems Research, in collaboration with the Bill & Melinda Gates Foundation, is developing a set of 20 case studies of primary health care systems in selected low- and middle-income countries as part of an initiative entitled Primary Care Systems Profiles and Performance (PRIMASYS). PRIMASYS aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance.

The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries. Furthermore, the case studies will serve as the basis for a multicountry analysis of primary health care systems, focusing on the implementation of policies and programmes, and the barriers to and facilitators of primary health care system reform. Evidence from the case studies and the multi-country analysis will in turn provide strategic evidence to enhance the performance and responsiveness of primary health care systems in low- and middle-income countries.

# 1. Introduction

## 1.1. Methodological approach to primary health care mapping

### 1.1.1. Methodology summary

The mapping process entailed two key processes: reviewing the relevant literature and documents, and conducting interviews with key informants across sectors (public, private, development partners, nongovernmental organizations [NGOs], providers and community representatives). Some of the primary information (including community-level interviews and some facility-level data) was gracefully provided by the Ministry of Health's Community Health Unit, based on a recently conducted situational analysis of the primary and community health services, done as part of the process for developing the first ever Kenya Community Health Services Policy (presently

in draft form with the Council of Governors). The situational analysis and the present study share a common focus, which made the raw data collected helpful for this work. The data were reanalysed with a different set of questions, with the aim of generating information for this report. Tables 1 and 2 present information on data sources and key informants.

### 1.1.2. Information sources

Key informants (Table 3) were individuals with good knowledge and status, who were willing to share what they knew on issues related to the community and PHC. The key informants were also useful in aiding the research team synthesize pieces of information from various reports. Key information was also collected during a workshop on community health services, held in Naivasha, Kenya.

**Table 1. Key databases and reports from which information was obtained**

Report or database	Information obtained
Kenya Demographic and Health Survey (2014)	Key demographic and health indices, including coverage for key maternal, neonatal and childhood services
Kenya Household Expenditure and Utilization Survey (2013)	Key care-seeking behavioural information, household expenditure on health and the risk of catastrophic expenditures, utilization of different types of providers
The Kenya Health Policy (2014–2030)	Overview of key statistics on causes of mortality, and the structure and functioning of the health system
Kenya Health Sector Strategic and Investment Plan (2014–2018)	Priority areas of focus and investment, and accompanying targets for primary health care (PHC)
The Second Medium Term Plan (2013–2017)	Public planning and expenditure following devolution of health services in 2013
The State of Health Services Delivery: an Assessment Report for Primary Level Facilities (2014), Ministry of Health	Performance of PHC facilities across different domains, including commodity security, information management, and presence of key staff and services
Kenya Service Availability and Readiness Assessment Mapping (SARAM) Report (2013), Ministry of Health	Service readiness across PHC facilities, including availability of essential commodities and supplies, and general readiness of facilities to offer various services
Human Resources for Health Norms and Standards Guidelines for the Health Sector (2014), Ministry of Health	Information on staff cadres, numbers and distribution across various levels, including PHC facilities

**Table 2. Stakeholders and key informants who provided the information used in the report**

Descriptor	Main areas of expertise	Main constituency represented
Ministry of Health – Community Health Unit staff	Level 1 of the health system – community health services and linkage to primary facilities	Community health unit
Ministry of Health – Division of Primary Health	Levels 1–3 of the health system, which includes primary services	Primary health unit
County health managers from five counties	Provision of PHC services under a recently devolved system	County Health Management Teams
PHC facility staff working in the counties	Community and PHC services under devolution	CHVs, CHEWs, PHC facility staff, including nurses, clinical officers, public health officers and health records information officers
Development partners and NGOs	Development support towards PHC strengthening as part of broader health systems strengthening	World Bank, AMREF, Kenya Red Cross, UNICEF, Measure, Population Services Kenya, Family Health Options – Kenya

AMREF: African Medical and Research Foundation; CHEW: community health extension worker; CHV: community health volunteer; NGO: nongovernmental organization; PHC: primary health care; UNICEF: United Nations Children's Fund

**Table 3. List of key informants**

Name	Position and organization
Professor Miriam Were	Goodwill ambassador for community and primary health services in Kenya
Dr Salim Hussein	Head, Community Health Unit, Ministry of Health
Mr Daniel Kavoo	Senior Programme Officer, Division of Primary Care
Ms Diana Kamar	Division of Primary Health, Ministry of Health
Mr Samuel Njoroje	Programme Officer, Community Health Unit, Ministry of Health
Ms Rose Njiraini	Health specialist, UNICEF Kenya
Mr Vincent Odiara	Health Communication & Marketing (HCM) Manager, Population Services International
Mr Elijah Kinyangi	Chief representative, Japan International Cooperation Agency
Mr Robinson Karuga	Research Manager at Liverpool VCT Care and Treatment – LVCT Health
Dr Edwin Barasa	Health Systems Researcher, Kenya Medical Research Institute

HCM: Health Communication & Marketing, VCT: voluntary counselling and testing

## 1.2. Country profile

Kenya has an estimated population of 45 million. According to the United Nations Development Programme (UNDP) Human Development Index (HDI) 2015, it ranks 145th out of 187 countries. Three quarters of the population reside in rural areas, with roughly 46% living below the poverty line. The country's gross domestic product (GDP) per capita stands at US\$ 1377 (Table 4). The country adopted a new Constitution in 2010 that, among other things,

resulted in devolution, with the national government taking on a stewardship role, and counties doing service delivery. Table 4 gives a brief summary of the key demographic and health-related indicators for the country.

## 1.3. Health profile

The ten leading causes of death in Kenya are HIV-related ailments (29%), perinatal conditions (9%), lower respiratory tract infections (8%),

**Table 4. Summary of the country profile**

Indicator/parameter	Value	Source
Total population	45.5 million	Human Development Report, 2015
Sex ratio: male/female	1:1.03	Human Development Report, 2015
Population growth rate	2.92%	Statistical Abstract, 2015
Population density (people/sq.km)	66	Kenya Population Census, 2009
Population distribution (rural/urban)	0.74/0.26	World Bank, 2015
GDP per capita	US\$ 1376.7	World Bank, 2015
Income inequality (Gini coefficient)	48.51	World Bank, 2005
Life expectancy at birth (years)	62	World Bank, 2014
Under-5 mortality rate	52/1000	KDHS, 2014
Maternal mortality rate	362 per 100 000	KDHS, 2014
Immunization coverage under 1 year (includes rotavirus)	74.9%	KDHS, 2014
Total health expenditure (THE) as a proportion of GDP	5.7%	World Bank, 2015
% total public sector expenditure on PHC	3.5%	Ministry of Finance, 2016
Per capita public sector expenditure on PHC	20 Kenya shillings	Ministry of Finance, 2016
Public expenditure on health as a proportion of THE	61.3%	World Bank, 2015
Out-of-pocket payment as a proportion of THE	26.1%	World Bank, 2015
Voluntary health insurance as a proportion of THE	11.7%	KHHEUS, 2013
Proportion of households with catastrophic health expenditure	12.7%	KHHEUS, 2013

GDP: gross domestic product; KDHS: Kenya Demographic and Health Survey; KHHEUS: Kenya Household Expenditure and Utilization Survey; MTEF: Medium Term Expenditure Framework; THE: total health expenditure

tuberculosis (TB) (6%), diarrhoea (6%), malaria (5%), cerebrovascular diseases (3%), ischaemic heart disease (3%), road traffic accidents (2%) and violence (2%) (1). Maternal and childhood mortality rates have improved, with the maternal mortality ratio reducing from 488/100 000 live births in 2009 to 363/100 000 live births in 2014, and under-5 mortality from 74 to 52 per 1000 live births over the same period. This is attributed to improved service delivery, including increased skilled attendance at delivery and immunization coverage. Immunization coverage increased from 77% in 2008/2009 to 79% in 2014, with the nutritional status of children improving, and an overall drop in stunting from 35% in 2008/2009 to 26% in 2014). The use of modern family planning methods increased from 32% in 2003 to 53% in 2014,

with a concomitant decline in the total fertility rate (4.9 births in 2003 to 3.9 births in 2014) (2).

Approximately 1.5 million Kenyans were living with HIV in 2015. However, the prevalence has been declining in recent years (6.4% in 2008 to 5.9% in 2015), with a larger drop among women. The epidemic is concentrated among commercial sex workers (29%), injecting drug users (18%) and men who have sex with men (18%). The number of HIV-infected adults receiving antiretroviral therapy (ART) was scaled up from roughly 6000 in 2003 to over 900 000 in 2015. Access to safe water remains low (42% access for rural populations, compared to 72% for urban) (3). Nearly half of all Kenyans (46%) live below the poverty line (4). Primary health facilities (especially public ones) have been reported to

**Table 5. General service readiness for KEPH services**

Facility type	No. of facilities	General service readiness index	Service readiness domain mean scores			
			Basic amenities	Basic equipment	Standard precautions	Essential medicines
Health centre	1064	65%	56%	80%	82%	43%
Dispensary	3676	55%	41%	70%	75%	34%
Medical clinic/VCT	2346	51%	46%	54%	63%	41%
Maternity/nursing home	301	71%	64%	75%	78%	66%

Source: Kenya Service Availability and Readiness Mapping, 2013

be pro-poor, particularly in rural areas (5). Health indicators are generally worse among poorer and less educated persons. For instance, the risk of losing a child during childbirth is lower among educated women (11/1000 live births) compared to uneducated women (15/1000 live births). However, neonatal mortality rates are similar for rural and urban dwellers (2).

## 1.4. Health system structure and performance

### 1.4.1 Service delivery structure

Kenya's health system has a pyramidal structure, with community services at the bottom and tertiary and specialized services at the top. The Kenya Health Policy has the following proposed four tiers: community services (tier one), PHC services (tier two, dispensaries, health centres and private clinics), secondary services or county referral services (tier three, comprising county referral facilities) and the national referral system, made up of the national referral facilities (tier four) (1).

### 1.4.2. Health systems performance

#### 1.4.2.1 General service readiness

The Kenya Service Readiness and Availability Assessment Mapping report (SARAM, 2013) defined service readiness as a health facility's ability to provide comprehensive services. The Kenya Essential Package for Health (KEPH) defines services that should be provided to different age cohorts, disaggregated by

level of care. There are four key indicators of service readiness for health facilities: standard precautions for infection control, availability of essential medicines, basic equipment and amenities (6). Table 5 summarizes the key readiness performance findings for PHC facilities.

In 2013, maternity/nursing homes had higher service readiness (71%, compared to health centres – 65%, dispensaries – 55% and clinics – 51%). Public facilities did better on basic equipment and standard precautions, with private ones having higher scores for basic amenities and essential medicines (6). Table 6 gives a summary of readiness across various service areas.

#### 1.4.2.2. Access to medicines

Medicine availability is assessed through tracking essential tracer medicines for different disease conditions, for instance, misoprostol as a tracer for maternity services (Table 7). The SARAM report showed a low availability of misoprostol in public health centres and dispensaries (9% and 3%, respectively), with better availability across private facilities (maternity homes 41% and medical clinics 12%).

Public health centres had a higher availability of certain neonatal medicines such as magnesium sulphate, benzyl penicillin, gentamicin, ceftriaxone and antenatal corticosteroids compared to public dispensaries. On the other hand, private facilities had higher availability overall.

**Table 6. Specific services offered in primary care facilities**

VARIABLES	PRIMARY CARE FACILITIES			
	Health centre	Dispensary	Medical clinic	Maternity/Nursing home
No. of facilities	1065	3676	2346	301
Mean availability of services	30.7%	28.4%	23.1%	27.3%
% of facilities offering all services	0.60%	0.40%	0.20%	0.00%
<b>SPECIFIC SERVICES</b>				
General outpatient	92%	85%	58%	84%
Integrated MCH/FP services	84%	76%	36%	71%
Accident and emergency	42%	26%	18%	51%
Emergency life support	26%	14%	11%	35%
Maternity	74%	35%	14%	57%
Newborn services	63%	37%	14%	57%
Reproductive health	80%	67%	33%	68%
Inpatient	41%	7%	7%	58%
Clinical laboratory	75%	34%	34%	68%
Specialized laboratory	9%	2%	4%	17%
Imaging, X-ray	3%	1%	2%	18%
Pharmaceutical	61%	43%	25%	59%
Blood safety	10%	3%	5%	26%
Rehabilitation	15%	11%	7%	16%
Palliative care	7%	3%	3%	19%
Specialized clinics	12%	4%	7%	16%
Comprehensive youth-friendly services	18%	9%	7%	19%
General operations	7%	3%	4%	30%

Source: Kenya Service Availability and Readiness Mapping, 2013

FP: family planning; MCH: maternal and child health

**Table 7. Percentage of facilities having the different tracer items, by PHC facility**

Facility type (no. of facilities)	Percentage facilities with selected tracer items									
	Mean availability (%)	Misoprostol (%)	Magnesium sulphate (%)	Benzyl Penicillin (%)	Gentamicin (%)	Ceftriaxone (%)	Antenatal steroids (%)	Amoxicillin suspension (%)	Oral rehydration salts (ORS) (%)	Zinc (%)
Health centre (1064)	48	80	82	43	66	27	14	75	89	79
Dispensary (3676)	39	70	75	34	49	17	7	73	84	77
Medical clinic/VCT (2346)	32	54	63	41	45	45	19	54	50	34
Maternity / Nursing home (301)	59	75	78	66	76	72	56	79	76	63

Source: Kenya Service Availability and Readiness Mapping, 2013

### 1.4.2.3. Use of skilled delivery and antenatal care

The majority of deliveries in rural areas are conducted by a nurse or midwife (69%), with a relatively higher number of deliveries among the urban population conducted by doctors (41%) (Table 8).

### 1.4.2.4. Immunization coverage

The Ministry of Health supports the Expanded Programme on Immunization (EPI) that covers basic vaccines such as tetanus, BCG, polio and measles. It also co-funds the pneumococcal vaccine (10%),

and yellow fever vaccine in high-risk regions. Recent achievements include introduction of the inactivated polio vaccine (IPV) and rotavirus, enhancing the vaccine cold chain system through electronic temperature monitoring devices and electronic stock monitoring tools, and substitution of trivalent oral polio (tOPV) with bivalent oral polio vaccine. Full immunization rates are similar for female and male babies (75.7 and 74.1%, respectively), but higher in urban areas (77.8%, compared to 73.3% for rural). Immunization coverage is higher for wealthier and more educated mothers (Table 9).

**Table 8. Use of skilled delivery and antenatal care (ANC)**

Background characteristic	Percentage of women receiving ANC services from					
	Doctor	Nurse/Midwife	Community health worker (CHW)	Traditional birth attendant	No ANC	Skilled provider
<b>Mother's age (years)</b>						
<20	28.6	66.3	0.1	0	5	94.9
20–34	31.8	64.2	0.4	0	3.3	96
35–49	29.8	63.4	0.5	0	6	93.2
<b>Residence</b>						
Urban	41	56.8	0.2	0	1.8	97.8
Rural	24.9	69.1	0.5	0.1	5.2	94
<b>Education</b>						
No education	18.9	63.2	2.1	0.3	15.1	82.1
Primary incomplete	26.1	68.7	0.1	0	4.9	94.7
Primary complete	31.5	65.4	0.5	0	2.5	96.8
Secondary +	38	60.6	0.1	0	1.1	98.6
<b>Wealth quintile</b>						
Lowest	20.5	68	1.1	0.2	9.9	88.5
Second	22.5	73	0.1	0	4.1	95.5
Middle	27.4	69.7	0.2	0	2.4	97.1
Fourth	33.8	63.6	0.4	0	2.2	97.4
Highest	48.8	50	0.2	0	0.9	98.8

Source: Kenya Demographic and Health Survey, 2014

**Table 9. Immunization coverage**

Characteristic	All basic vaccinations (%)	Pneumococcal (%)			Full vaccination (%)	No vaccinations (%)	% with a vaccination card seen (%)	No. of children
		1	2	3				
<b>Sex</b>								
Male	79.3	94.3	90.8	84.5	74.1	12	75.3	1 966
Female	79.5	100	96	85.9	75.7	22	73.9	1 811
<b>Residence</b>								
Urban	83	94.1	90.3	86.3	77.8	1.3	67.2	1 330
Rural	77.4	93.5	91.1	84.5	73.3	1.8	78.7	2 447
<b>Education</b>								
No education	56.9	89.4	85.1	74.5	54.6	5.4	71	431
Primary incomplete	74.8	92.6	90.1	82.8	69.8	1.4	77.5	1 072
Primary complete	84	93.5	91.6	87	78.8	1.2	76.6	1 021
Secondary +	87.3	96.3	92.9	89.3	83	0.9	71.9	1 253
<b>Wealth quintile</b>								
Lowest	66.1	90.4	86.6	78.9	61.5	3.4	77.7	940
Second	80	93.9	92.5	84.2	75.3	1.1	79.4	765
Middle	81.7	94.8	92.5	87.4	78.3	1.3	74.5	667
Fourth	87.3	94.7	92.3	88.3	81.5	0.3	76.9	666
Highest	86.4	95.9	92	89.3	82.4	1.5	64	739

Source: Kenya Demographic and Health Survey, 2014

## 1.5. Timeline: the historical development of PHC in Kenya

Figure 1 shows the historical development of PHC in Kenya. While the PHC concept was piloted in Kenya in 1977 after a period of post-election centralization and reorganization of the health services, the 1978 Alma-Ata Declaration provided impetus that contributed to the introduction of over 250 rural health units across the countries under the Alma-Ata Declaration. Integration of PHC services in the country's health care system was further catalysed by the Bamako Initiative of 1987, which sought, among other things, to widen access to PHC services through increasing efficiency, effectiveness and financial sustainability. This contributed to an increase in programmes targeting health promotion, disease prevention, and

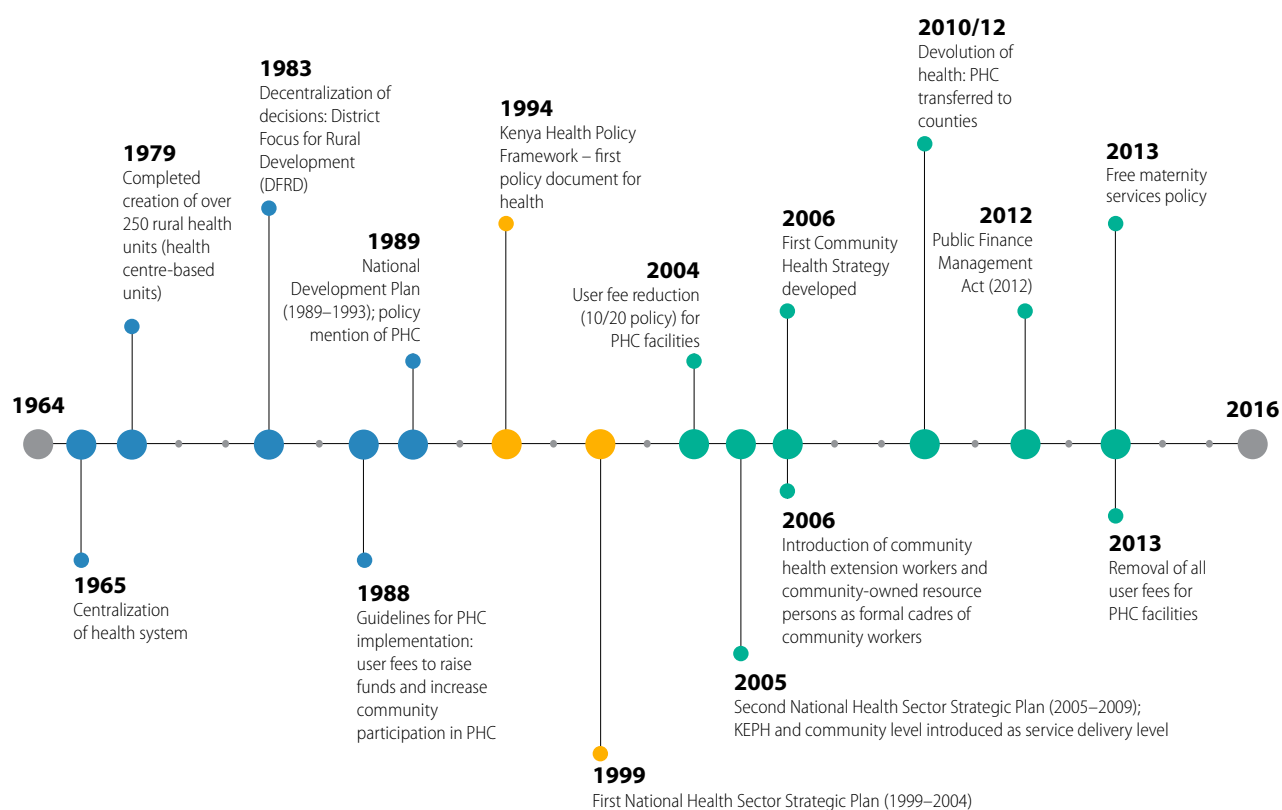
maternal and child health, with more involvement of community members in health matters.

The National Development Plan of 1989 provided the first framework for planning and improvement of the health services. However, challenges in getting finances to train health workers on PHC resulted in the policy being relatively ineffective. PHC evolved to be a vertical disease-specific programme facing similar austerity measures imposed during the 1980s as other programmes. Health facilities were hard hit and resorted to cost-sharing, which negatively impacted on access among the poor. User fees remained largely in place up until devolution of the health services in 2013.

Kenya first developed a comprehensive sector wide policy for health in 1994. The document, called the



**Figure 1. Timeline showing key milestones in the evolution of PHC in Kenya post-Independence**



Kenya Health Policy Framework (1994), set out to establish the fundamental principles of primary health, including the objectives of reducing health disparities through more equitable resource distribution, enhanced regulatory role by the government, and increased private sector and community involvement in health care. However, the Policy was unclear on the specific strategies for achieving these goals. An attempt was made to correct this in 1999, when the Ministry developed the first ever sector wide strategic plan, the First Health Sector Strategic Plan (1999–2004). In addition to identifying specific targets to be achieved over a five-year period, the Plan refocused the sector’s aims and resources from curative to PHC and preventive services, emphasizing the need to decentralize health services. However, the Plan did not achieve full impact for a number of reasons, including the absence of targeted and costed annual plans, and poor management and coordination across levels. These inadequacies affected PHC services, resulting in a worsening of health indicators.

In 2005, the Ministry of Health launched the Second National Health Sector Strategic Plan (NHSSP II), aiming to reverse the worsening indicators through a service delivery framework, the Kenya Essential Package of Health (KEPH). Through the KEPH, service packages were defined for all age cohorts, to be delivered through six levels of the health system. This was the first time the community level was formally defined as a level of health services delivery (defined as level 1). To operationalize level 1 services, the government coordinated the development of the first ever Community Health Strategy in 2006. The NHSSP II was operationalized through annual plans, which provided a better implementation framework, and is credited with contributing to improved health indicators. Despite the success of NHSSP II, health financing still remained skewed, with a larger portion of finances being channelled to curative services. On the other hand, community workers were demotivated as remuneration plans had not been set out and there was erosion of bottom–up planning (7).

## 2. Policy landscape and governance for PHC

### 2.1. Policies governing PHC in Kenya

#### 2.1.1. The Kenyan Constitution

The Constitution gives every Kenyan the right to the highest attainable standard of health, emphasizing that nobody should be denied access to emergency treatment (8). The Constitution (Articles 53–57) further emphasizes human dignity principles and basic rights for all persons, with a special focus on children, persons with disabilities, youth, minorities and marginalized groups, and the elderly, and directs that efforts be put in place to ensure proper access to essential services. Article 174 recognizes the right of communities to manage their own affairs, emphasizing promotion of the rights of minorities, and provision of proximate, easily accessible services. The Constitution devolves key functions and services, including health service delivery, to 47 counties, leaving the national government with the mandates of policy development, regulation and setting of standards, technical assistance to counties and tertiary service delivery.

#### 2.1.2. Kenya Vision 2030

Vision 2030 is Kenya's development blueprint aimed at transforming the country into a globally competitive and industrialized middle-income country by 2030 (9). It identifies key activities under economic, social and political pillars, meant to enable achievement of the goal. Two activities are mentioned as vital for achieving the goal of a strengthened health system: (i) devolution of funds and management to communities and counties; and (ii) shifting the emphasis from curative to preventive health. The first flagship project under the health component is to "Revitalize Community Health Centres to promote preventive health care (as opposed to curative) by promoting healthy individual lifestyles". This puts community health and PHC services at the centre of the policy.

#### 2.1.3. Second Medium Term Plan, 2013–2017

The Second Medium Term Plan, 2013–2017 identified key policy actions, reforms and programmes that the government should implement between 2013 and 2017 (10). The Plan defines actions to be undertaken by the government towards meeting key priorities identified under Vision 2030. Devolution is a central feature of the Plan. The Plan emphasized countrywide scale up of high-impact community interventions, including maternal, neonatal and child health (MNCH), strengthening community health services (a key pillar of empowering communities and PHC), strengthened linkages between community services and primary health facilities, strengthening community awareness of health rights and accelerating MNCH interventions.

The Second Medium Term Plan's objectives are: (i) to reduce the maternal mortality ratio (MMR) from 488/100 000 to 150/100 000; (ii) to reduce the under-five mortality rate from 74/1000 to 35/1000; (iii) to reduce the infant mortality rate (IMR) from 52/1000 to 30/1000; (iv) to reduce the HIV/AIDS prevalence rate from 5.6% to 4%; (v) to improve under-one immunization coverage from 83% to 90%; and (vi) to reduce the malaria inpatient case fatality rate from 15% to 5%. The Plan proposes a special focus on providing universal access to health care, preventive and primary health care, and managing communicable and noncommunicable diseases (NCDs), as well as maternal, neonatal and childhood diseases.

#### 2.1.4. Kenya Health Policy 2014–2030

The Kenya Health Policy (2014–2030) outlines plans to achieve the health-related targets outlined in the Constitution and Vision 2030, with a broad objective of making the constitutionally mandated "Right to health by all Kenyans" declaration a reality (1). The Policy's primary goal is the attainment of universal coverage of essential services that positively

contribute towards improved health. The Policy identifies six objectives: eliminating communicable diseases, halting and reversing the rising burden of noncommunicable diseases and mental disorders, reducing the burden of violence and injuries, providing essential health care, minimizing exposure to health risk factors, and strengthening collaboration with other sectors to improve health.

The Policy defines the four tiers of the health system as community health services, primary health care, primary referral and tertiary referral services. Tier one comprises the community unit, identified as the first level of provision of health services. Its primary purpose is creating an appropriate demand for services. Tier two (the PHC level) includes dispensaries and health centres, whose primary objective is to respond to the demand created at the community level, provide basic preventive and curative services, and act as a link to referral facilities. Tiers three and four represent secondary and tertiary referral, respectively.

To operationalize these provisions, the Policy calls for a deliberate building of progressive, responsive and sustainable technologically driven, evidence-based and client-centred health systems, which run from the community level to the national referral level (1). It gives directions to ensure significant improvement in the overall health status of Kenyans, in line with the country's long-term development agenda, Vision 2030, the Constitution of Kenya 2010 and global commitments.

The Kenya Health Policy also recognizes improved access to affordable and quality health care services as important outputs necessary to achieve the health goals and objectives set out in the policy. This means that the government needs to have systems in place to accurately identify and address problems in the quality of health service delivery and policies to support it. This is best achieved through strong systems at the community and PHC level. Communicable diseases, maternal, perinatal and nutritional conditions account for two thirds of all deaths in the country, followed by NCDs (28%) and

injuries (9%). The Policy targets a 50% reduction in deaths per 1000 persons, which translates to a 62%, 27% and 27% decline in deaths due to communicable diseases, NCDs and violence/injury related causes, respectively.

### **2.1.5. Kenya Health Sector Strategic and Investment Plan 2013–2017**

The Kenya Health Sector Strategic and Investment Plan (KHSSP) 2013–2017 outlines the health sector medium term focus, objectives and priorities that must be met in order to achieve the objectives outlined in Vision 2030 and the Kenya Health Policy. The Investment Plan guides the allocation of resources, annual planning and performance contracting in health. The document builds on provisions outlined in its predecessor, the Second National Health Sector Strategic Plan II, which had: (i) introduced the Kenya Essential Package for Health, a comprehensive essential package that defines services and interventions to be delivered to different age groups; and (ii) formally introduced the first ever Kenya Community Health Strategy.

The Kenya Health Sector Strategic and Investment Plan identifies the following priorities in relation to PHC: (i) revitalization of the community health strategy, with a specific focus on incentivizing and retaining community health workers; (ii) expanding the scope of the community health strategy by including services previously not defined as such under the Second Health Sector Strategic Plan; and (iii) involving community health workers in the detection and diagnosis of NCDs to strengthen PHC. These priorities are to be implemented through a community health approach.

At the time of developing the Investment Plan, there were 7568 PHC facilities (2526 dispensaries, 3929 private clinics, 935 health centres and 178 maternity homes). It set targets aimed at strengthening PHC through: (i) upgrading 40% of dispensaries into full primary care units, providing a more comprehensive set of services, including delivery; (ii) ensuring that all health centres function as full primary care facilities

to provide a more comprehensive set of services; and (iii) establishing a fully functional referral system in at least 80% of counties, and procuring infrastructure and equipment for 2000 dispensaries and 500 health centres.

The areas identified for investment in upgrading primary facilities include adding pharmacies in facilities, building staff houses, and providing access to utility vehicles and motorcycles.

It is not clear yet to what degree these targets have been met, as there has not been an evaluation of the Kenya Health Sector Strategic and Investment Plan. Furthermore, devolution of health services has resulted in the proliferation of new PHC facilities, some of which are not formally gazetted by the national government, making it difficult to track progress in the number of individuals they serve and their impact.

The Investment Plan identified flagship programmes for the 2013–2017 period: establishing a fully functional referral system; scaling up high-impact community-level interventions; promoting health and medical tourism; strengthening human resources for health (HRH); promoting the use of locally derived natural health products; introducing health care subsidies for social protection of the poor; establishing model county hospitals; establishing e-health hubs in health facilities; and translating research to policy and practice.

### 2.1.6. Community Health Strategy

Kenya's Community Health Strategy is modelled on the comprehensive PHC concept, with a strong focus on the key principles of partnership, community participation and empowerment, and access to health care (11–13). The Strategy emphasizes community engagement in promoting health care, especially with regard to level one services (approximately 70% of common conditions are manageable at the household and community levels). This informed the development of the first-level Community Health Strategy document in 2006 (14). The Ministry of Health is presently leading efforts

to develop a community health policy document to help link community health activities to broader policy changes that have taken place following devolution. The emphasis is on improving access to essential services, and dealing with emerging challenges and opportunities that have arisen following devolution. In addition to addressing service delivery constraints, policy-level actions will include health systems responses alongside disease- or service-specific responses.

Central to the Community Health Strategy are the community health workers (referred to as community health volunteers, or CHVs), who visit households regularly to collect vital information, including demographic characteristics, immunization coverage, skilled attendant delivery rates, information on illnesses within the household and healthy community practices.

The CHVs and community health extension workers (CHEWs) have links to the health facility management committees (HFMCs). They work with the HFMCs and get support from facilities. These links also help in enabling monitoring and evaluation at the community level. The community health committees have representation at the facility management committees and as such take part in facility planning. At the facility level, the coordinator of the CHEWs collates information from them and summarizes them in the form of trends, activities, incidences and recommendations for display and/or decision-making support.

However, Kenya has faced challenges in scaling up the Community Health Strategy, mainly linked to inadequate resources to allow household visits by CHVs, low morale among CHVs (are not paid by the government), lack of essential materials and supplies (including reporting tools, and commodities such as water treatment products [information from a key informant at the Ministry of Health]).

### 2.1.7. Global health commitments

During the third Global Human Resources for Health (HRH) forum in Brazil in 2013, Kenya committed to

five HRH commitments: recruiting 40 000 CHEWs by 2017; advocacy to counties to establish community health services by 2017; establishment of community health units (from 2511 units in 2012 to 9294 units in 2017); and establishing mechanisms for community health insurance to motivate CHVs by 2015. Kenya has also pledged to the global commitments of universal health coverage in the Sustainable Development Goals (SDGs).

## 2.2. The structure of PHC service delivery in Kenya

### 2.2.1. Overall structure of the health system

The Government of Kenya is involved in health through county governments, the national government Ministry of Health and semi-autonomous government agencies. In addition, the private commercial and non-profit sectors are strongly involved in service delivery. Table 10 shows the number and ownership of health facilities in Kenya, while Table 11 shows the number of facilities at different levels.

Development partners are highly involved in health, especially in reproductive health, HIV and AIDS testing, treatment and counselling, malaria and TB. Partners are also involved in in-service training of health professionals across different areas, particularly vertical programmes such as HIV, malaria and TB.

### 2.2.2. Governance, management and organization of PHC services

Primary facilities constitute the majority of facilities in Kenya (6). The public sector runs dispensaries and health centres, while the private sector has medical clinics and maternity and nursing homes. Governance structures operate at the national and county levels. At county level, a county executive committee (CEC) member for health sits at the helm of the health department, with the responsibility of coordinating and managing health care services. The CEC works with a county health management team (CHMT), whose composition includes heads

**Table 10. Distribution of health facilities by ownership (2013/2014)**

OWNER CATEGORY	Number of facilities	Proportion
Ministry of Health	3 965	42.9
Other public institution	438	4.7
Faith-based organization	1 053	11.4
Private institutions and private practice	3 500	37.8
Nongovernmental organization	293	3.2
Total	9 249	100

Source: Master facility list/health information systems

**Table 11. Distribution of health facilities by type (2013/2014)**

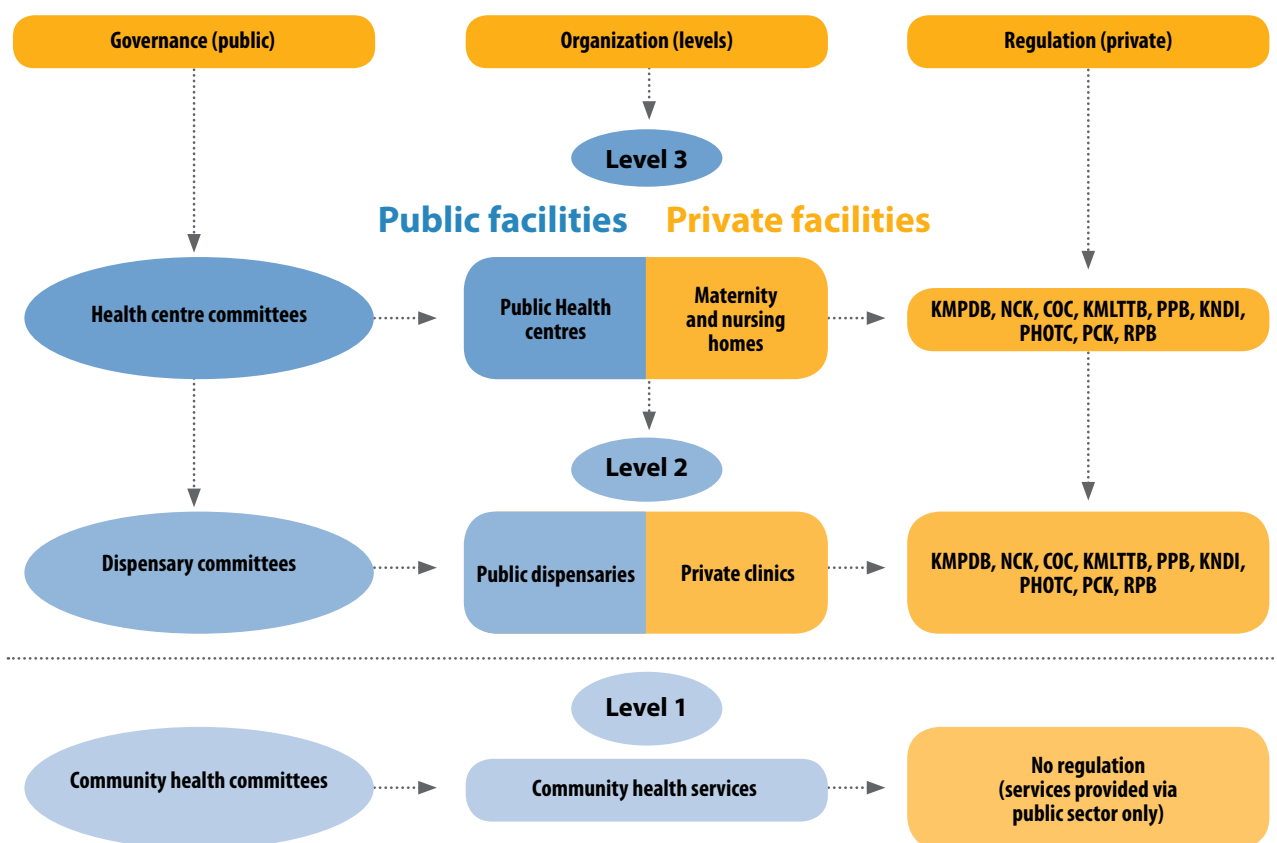
Type	Number of facilities	Percentage
Hospital	507	5.5
Health centre	1 012	10.9
Maternity and nursing home	232	2.5
Medical clinic	2 943	31.8
Dispensary	4 239	45.8
Other	316	3.4
Total	9 249	100

Source: Master facility list/health information systems

of departments, including those of clinical services, nursing, pharmacy and public health. The chief officer for health is the accounting officer; he/she reports to the CEC for health. Figure 2 shows the governance of the health sector.

At PHC facilities, governance is mandated to HFMCs, composed of persons in charge of facilities and leaders from the community. Community health units are governed by community health committees comprising community representatives, CHEWs and CHW representatives

**Figure 2. Structure and governance of primary health care facilities and community units**



Key: COC: Clinical Officers Council; KMLTTB: Kenya Medical Laboratory Technicians and Technologist Board; KMPDB: Kenya Medical Practitioners and Dentistry Board; KNDI: Kenya Nutritionists and Dieticians Institute; NCK: Nursing Council of Kenya; PHOTC: Public Health Officers and Technicians' Council of Kenya; PPB: Pharmacy and Poisons Board

Key informants reported that the governance structures remain relatively ineffective, particularly following devolution of the health services. This is partly linked to the fact that key decisions are now undertaken at the locally based county offices (rather than at the national level). In addition, the roles of community-represented governance bodies have been reduced following abolition of user fees (previously, the committees had a role in deciding how user fees should be spent).

Currently, there are no data on the distribution of PHC facilities across rural, periurban and urban areas. However, based on the SARAM report of 2013, 66.3% of health facilities are based in rural areas (5567) while 33.7% of the facilities are based in the urban areas (2834). The abolition of user fees by the government has helped to promote equity at the service delivery level. However, there has not been a post-devolution evaluation to determine the degree to which equity has been achieved with regard to both access and utilization across primary facilities.

### 3. Financing PHC in Kenya

#### 3.1. Kenya health financing landscape

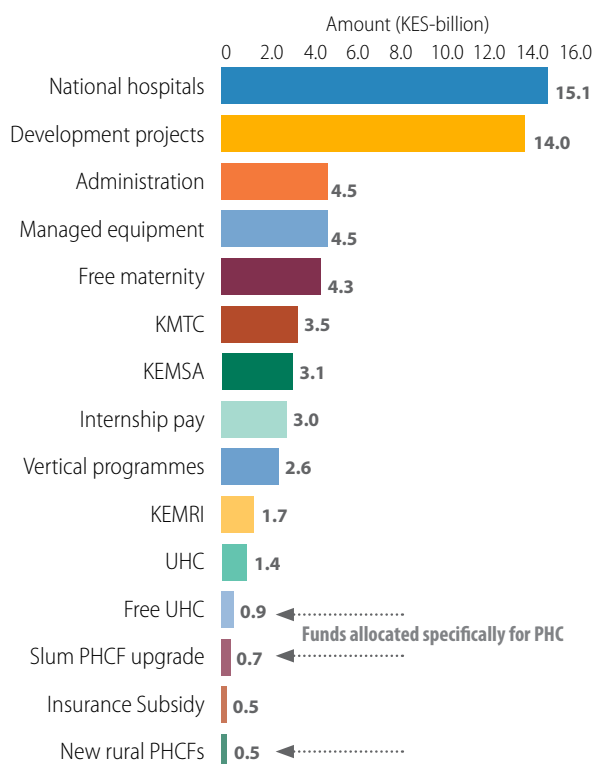
The four main sources of health care financing in Kenya are general tax, insurance, out-of-pocket spending, and development partners and NGOs. Kenya’s national budget for health for 2016/2017 was KES 60.3 billion (US\$ 603 million), comprising 4% of the total national budget (15). However, additional funds are available for health from the KES 298 billion (US\$ 2.98 billion) allocated to county governments for their activities. Based on previous county budgets, roughly one fifth of the county allocations go towards health services delivery.

The largest proportion of the KES 60.3 billion goes to curative services (roughly 40%). The only funds specifically allocated for PHC (roughly 3.5% of the total government expenditure) are (i) KES 900 million

(US\$ 9 million) allocated for free PHC (to be sent to counties to compensate for user fee removal at primary facilities), (ii) KES 500 million (US\$ 5 million) for establishing PHC facilities in poor/hard-to-reach areas, and (iii) KES 700 million (US\$ 7 million) for upgrading clinics in slums (Figure 3). However, PHC will also benefit from the KES 4.3 billion (US\$ 43 million) set aside for free maternity services, which will be channelled via the National Hospital Insurance Fund to reimburse facilities for deliveries and perinatal services.

Funds from the national government are distributed on a needs basis at the county level. In financial year 2014/2015, county governments made an effort to increase the allocation for health by 8.5% from the previous financial year 2013/2014, as compared to

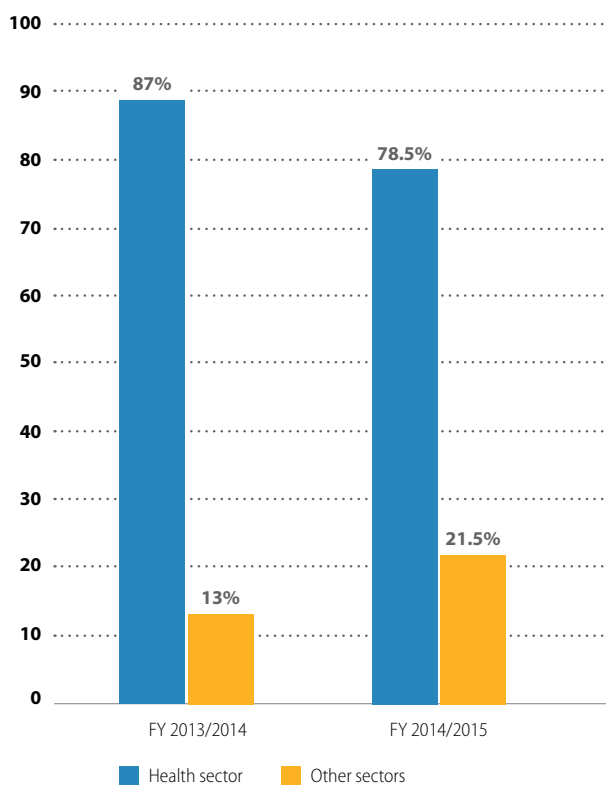
**Figure 3. Ministry of Health budgetary allocation (2016/2017)**



Key: KMTC = Kenya Medical Training College; KEMSA = Kenya Medical Supplies Authority; KEMRI = Kenya Medical Research Institute; UHC = universal health coverage; PHCF = primary health care facility.

Source: Developed for the report using data from the Kenya National Budget 2016/2017, Treasury, Government of Kenya

**Figure 4. Health services’ allocations as a percentage of county budgets (FYs 2013/2014 and 2014/2015)**



Source: National and county health budget analysis, 2015

**Table 12. Trends in out-of-pocket expenditures (2013)**

		2007	2013
<b>Outpatient</b>	Overall spending (billion)	KES 25.1 (US\$0.025)	KES 48.4 (US\$ 0.048)
	Per capita spending	KES 676 (US\$ 0.676)	KES 1 254 (US\$ 1.254)
<b>Inpatient</b>	Overall spending (billion)	KES 18.8 (US\$ 0.018)	KES 13.7 (US\$ 0.013)
	Per capita spending	KES 505 (US\$ 0.505)	KES 355 (US\$ 0.355)
<b>Total</b>	Overall spending (billion)	KES 43.9 (US\$ 0.043)	KES 62.1 (US\$ 0.062)
	Per capita spending	KES 1 181 (US\$ 1.181)	KES 1 609 (US\$ 1.609)

Source: Kenya Household Health Expenditure and Utilization Survey, 2014

**Table 13. Incidence of catastrophic health spending**

2003		2007		2013	
Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)	Headcount (%)
10% threshold	40% threshold	10% threshold	40% threshold	10% threshold	40% threshold
6.7	5.2	15.5	11.4	12.7	6.2

Source: Kenya Household Health Expenditure and Utilization Survey, 2014

allocations for other sectors (Figure 4). Despite the improvement, the counties still have 75% of the health funds being channelled to the recurrent budget (salaries), leaving a smaller proportion for development.

### 3.1.1. Spending patterns

The overall spending on outpatient services increased from KES 25.1 billion (US\$ 251 million) in 2007 to KES 48.4 billion (US\$ 484 million) in 2013, while inpatient spending reduced from KES 18.8 billion (US\$ 188 million) to KES 13.7 billion (US\$ 137 million) over the same period (Table 12). Overall, there has been an increase in out-of-pocket spending on health. According to the Kenya Household Expenditure and Utilization Survey (2013), there was an upward trend between 2007 and 2013 (KES 43.9 billion or US\$ 439 million to KES 62.1 billion or US\$ 621 million) (16).

### 3.1.2. Proportion of households experiencing catastrophic health expenditures

Catastrophic health spending occurs when out-of-pocket health expenditure exceeds 10% of the total expenditure and 40% of non-food expenditure. In 2013, there was a 2.8% decline in households that allocated at least 10% of the total household expenditure to health spending from 2007, as compared to the 8.8% increase experienced between 2003 and 2007 (Table 13).

A higher percentage of catastrophic expenditure results in increased poverty across households. Health insurance is an intervention that can reduce catastrophic health spending. However, Kenya's coverage remains low overall, at 17.1%, with the National Hospital Insurance Fund covering 88.4%, and private- and community-based insurance covering 9.4% and 1.3%, respectively (Table 14).



**Table 14. Insurance coverage by type (2013/2014)**

Insurance type	Population covered (%)
National Hospital Insurance Fund	88.4
Private insurance	9.4
Community-based insurance	1.3
Others	1.0

Source: Kenya Household Health Expenditure and Utilization Survey, 2014

## 3.2. Financing mechanism for primary care facilities

### 3.2.1. County government

The Public Finance Management Act, 2012 stipulates that the county government should hold all revenue in a county revenue fund (17). The counties should then allocate and remit funds to PHCs based on their work plan. Monthly sub county meetings are held at the county offices to facilitate reporting on supplies dispensed to facilities. To supplement costs and boost preventive and promotive services within counties, some counties have adopted innovative ways of using cash incentives to increase the coverage of essential services (see example in [Box 1](#)).

#### Box 1. Oparanya care

The initiative, carried out in Kakamega county, was launched in 2014. Under the programme, pregnant women receive KES 2000 (US\$ 20) every four months when they visit facilities for primary health care services. This goes on for a year and a half. The money caters to the child's nutritional needs. Kakamega county introduced this to reduce the high infant mortality rates linked to poor nutrition.

### 3.2.2. Health Sector Services Fund

The Health Sector Services Fund (HSSF) is a government-led PHC facility financing mechanism developed under the Second National Health Sector Strategic Plan II (2005–2012) and the Community

Health Strategy. The mechanism is supported by the Kenyan Government and grants from the Danish International Development Agency (DANIDA) and the World Bank Group, through the Health Sector-Wide Approach (SWAp). In addition, facility-generated user charges also contribute to the Health Sector Services Fund.

The Fund's primary goal was to enhance participatory decentralized planning and delivery of the Kenya Essential Package of Health Services at dispensaries and health centres. The Fund sought to address delays in dispensing funds by directly crediting monies to facility bank accounts (18). The funds would help facilities meet key costs, including maintenance and operations of the facility, equipment and vehicles. The funds also covered record-keeping, supply of essential consumables, electricity and water payments, and supporting staff for upkeep of the facility. In addition, the Fund explicitly required facilities to have active health facility committees (which are governance bodies for primary facilities, made up of representatives from the community and facility).

In 2012, the Public Finance Management Act was passed, resulting in major structural changes in the Health Sector Services Fund. The Act required that health facilities not operate bank accounts, and that all funds (including user fees) be remitted to the respective county revenue fund for appropriation. This resulted in health facilities losing autonomy, and depending more on the respective county governments (19). The changes also caused fear and uncertainty among development partners. In 2013, DANIDA opted to transfer its contribution to the county governments as a ring-fenced fund specifically targeting primary health facilities, while the World Bank continued to transfer funds to health facilities directly. However, a key informant said that the World Bank is also resorting to the "ring-fenced transfer to county" approach in dispensing PHC facility funds.

### 3.2.3. User fees

User fees were first introduced in Kenya in the late 1980s, following periods of stagnant economic growth and rapid population growth. The fees remained largely in place, and usually varied widely across facilities/regions until 2004, when the government introduced a new policy, the 10/20 Policy. The Policy was aimed at making the charges uniform across health centres and dispensaries. Services at these facilities were allowed to charge only a flat rate of KES 10 (US\$ 0.2) at dispensaries and KES 20 (US\$ 0.3) at health centres. These fees were broadly referred to as registration fees, and were aimed at ensuring that facilities got some income, without creating a financial barrier to access.

The 10/20 Policy also guaranteed exemption from payment for antenatal care, deliveries, care for children under 5 years of age and treatment of malaria, TB and sexually transmitted infections. Poor households were also entitled to a fee waiver. This made health services equitable for the majority of the population, where half of the population lives below the poverty line in rural areas (4).

The government committed to training of health workers, provision of facility infrastructure and of medical supplies and drugs. A team consisting of the health worker in charge and community members managed the user fees collected. This income was mainly for maintenance and operations of the facility. A large proportion of the money was retained at the facility.

Though user fees were successfully implemented across health centres and dispensaries, adherence to the 10/20 Policy was low. In some instances, facilities charged an extra fee or failed to apply the waiver. Reasons for non-compliance included the need for extra revenue for operations and inadequate definition of pricing structures for other services such as laboratory (20).

The enactment of the Public Finance Management Act (2012) rendered user fees redundant. In 2013, all user fees were abolished for primary facilities via a

Presidential mandate dubbed “Healthcare: towards a healthier Kenya”. This remains in place to date. PHC clients are presently required to only purchase a book during their visits, which is used to record processes of care and treatment given. The cost of the book is minimal overall. While some PHC facilities have branded books, others prefer to not sell the books, and instead, refer the patients to nearby shops. A key informant in a facility that does not sell books said that the reason they do not sell books is to avoid political pushback by local politicians, who perceive any charges to PHC patients as inappropriate.

### 3.2.4. Health insurance

The National Hospital Insurance Fund (NHIF) is Kenya’s public health insurance scheme. It is one of the oldest government health insurance schemes in sub-Saharan Africa. Like other social insurance schemes, the National Hospital Insurance Fund is compulsory for all salaried Kenyans, and is increasingly reaching out to those working in the informal sector. The premiums are levied in a progressive manner (higher premiums for those earning more), with direct deduction through the salary. Presently, contributions vary from KES 150 (US\$ 1.5) for those earning a monthly salary of up to KES 999 (US\$ 9.99), to KES 1700 (US\$ 170), for those earning above KES 100 000 (US\$ 1000) per month. Those who are self-employed or working in the informal sector contribute a fixed premium rate of KES 500 per month on a voluntary basis. It is estimated that over 18% of the Kenyan population is covered through the National Hospital Insurance Fund (over 90% being from the formal sector). The informal sector coverage remains low, despite the fact that three quarters of Kenyans work in this sector.

The National Hospital Insurance Fund covers all essential PHC services, including consultation services, basic diagnostic services, prenatal, delivery and postnatal services. It also covers inpatient services, and has more recently expanded to include specialist services such as surgery, cancer treatment and dialysis. It has been identified as the primary vehicle for universal health care coverage (UHC) in

Kenya. However, a majority of public PHC facilities have not been empanelled to provide services under the cover, which has been a major contributor to their underfunding. However, this is poised to change, as the National Hospital Insurance Fund recently removed the relatively strict empanelment criteria that locked out most of the facilities (decision to remove the empanelment assessments taken to allow more facilities to join the Fund, and enable achievement of UHC). It is expected, moving forward, that PHC facilities will benefit from funds provided through the scheme.

### 3.3 Donors' commitment

Development partners provide technical and financial support to the health sector. These include multilateral initiatives such as the Global Fund to Fight HIV, TB and Malaria (Global Fund), the Vaccine Alliance (GAVI); bilateral partnerships (including the United States Agency for International Development [USAID], UK Aid Direct, DANIDA, Japan International Cooperation Agency [JICA], among others); and philanthropic organizations such as the Bill and Melinda Gates Foundation. The partners provide support through direct funding of programmes, or through pooled funds to support a broader set of components. Some of the funds are channelled through NGOs and community-based organizations (CBOs), which makes it difficult to quantify the exact amount of money targeted towards PHC.

At the county level, efforts have been made to coordinate the activities of development partners. Most counties have set up entities called "county stakeholder forums", which bring together county health managers, community members, development partners and the private sector, with the sole purpose of coordinating efforts towards improving health care. Through the forums, discussions are held on how best to coordinate efforts to strengthen the health system and achieve health goals. Some counties now require that partners consult them before engaging in any activities to ensure that the priority needs of their respective communities are served. Some counties have in the

past complained of partners discriminating against certain subcounties, preferring instead to work in more accessible regions that are closer to town (information from a key informant). This contributed to some inequity.

Mapping and quantifying donor commitment was not possible, mainly because of the diverse nature of donor support. Some partners cut across sectors (for instance, health and agriculture), while others provide support directly to community health units (usually in terms of stipends and other incentives, which vary considerably across regions and time periods, and are sometimes irregular).

## 4. Human resources for health

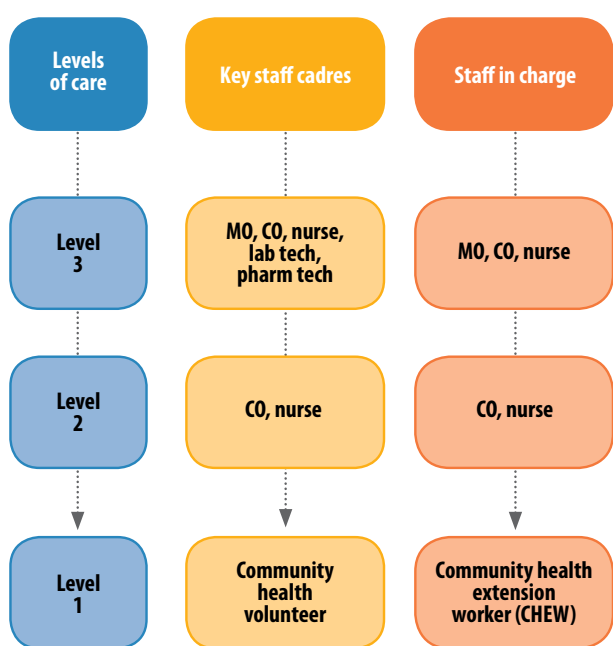
### 4.1. Overview

The Kenya Essential Package for Health (KEPH) outlines staffing requirements for PHC. According to the Package, the key cadre staff for level one is the CHV, level two has the nurse and clinical officers, while level three has medical officers, clinical officers, nurse, laboratory technicians and pharmacy technicians (Figure 5).

PHC facilities are primarily staffed by nurses, clinical officers and public health staff, with a small percentage of medical officers (Table 15). Clinical officers have a diploma or higher-diploma level training in clinical medicine, and would be the equivalent of physician assistants, but with perhaps more training and responsibility. Table 15 gives a summary of the key cadres of health workers in Kenya.

Medical training institutions are increasing in number, producing more graduates. Presently, there are more than five universities training medical officers, up from two in 2007. The Kenya Medical Training College trains the majority of diploma- and certificate-level cadres, and established 10 more campuses between 2011 and 2014, leading to an increase in student population (from 19 000 in 2011 to 23 000 in 2014). However, the public health system is unable to absorb the majority of graduates due to concerns over a ballooning wage bill. In addition, there have been numerous unrests and industrial action calls following devolution of health services, with complaints of poor personnel management by county managers. Some have called for reversal of the health services function, but this cannot happen in the absence of a Constitutional referendum.

**Figure 5. Staffing of public primary health care facilities and community units**



CO: clinical officer; MO: medical officer

**Table 15. Numbers of key cadres of staff in PHC facilities in Kenya**

Staff cadres	Community level	Primary care
Medical doctors and specialists	-	56
Dentists and technologists	-	8
Clinical officers (including specialists)	-	397
Nurses (all cadres)	24	6 090
Public health officers and technicians	289	2 185
Pharmacists and technologists	-	76
Lab technologists and technicians	-	676
Nutritionists	-	106
Health record & information technician	-	110
Trained community health workers	12 949	3 096
Social health workers	300	16
Community health extension workers	483	512

## 4.2. Human resources at the community level

The 2006 Community Health Strategy introduced two new cadres: community-owned resource persons (CORPs), and the community health extension workers (CHEWs). Prior to that, community health activities were implemented by a less clearly defined cadre referred to simply as community health workers (CHWs), whose work was not clearly spelt out, and who were supported almost exclusively by development partners. There was no national curriculum for training these personnel, and no clear mandate on what they should do, and how they should be supported by the government.

Subsequent evaluation of the Strategy recommended a change in the name for community health workers, from CORPs to community health volunteers (CHVs), a title that is used till date. The change was informed by the need to emphasize the voluntary nature of the position.

### Community health volunteers (CHVs)

CHVs are community members recruited as volunteers, and supervised by community and facility management teams to support and empower households to engage in appropriate health practices, and seek care when required. CHVs are trained using a standard training curriculum.

While there is no formal policy for remuneration of CHVs, some counties and partners working in the community often provide some form of payment as an incentive. This varies considerably across the country. Some counties have a formal remuneration mechanism, paying an average of KES 2000 (US\$ 20) per CHV per month. While this is relatively small, it has been well received, particularly across rural counties. Counties with an approved payment structure include Siaya, Homa Bay and Nyeri. Partner support for CHVs is fairly common across most counties, though it is highly fragmented and often poorly coordinated with other county activities. However, counties are trying to correct this. In Kakamega, for instance, partners are required to first consult

the county health management and refer to the Community Health Strategy before implementing activities. Those partners whose activities do not fit in with the county plans are required to either change them, or work with the management to find alternative areas for support (*information from key informant in Kakamega*).

One increasingly popular innovative solution to the challenges of CHV retention and motivation is the establishment of income-generating activities for the community units. These tend to be relatively small projects implemented within community units for the benefit of the members and the community. Activities include animal and poultry farming, crop farming and operating of retail businesses. Some units have organized themselves and registered as CBOs, thus putting themselves in a position to receive government and donor funds aimed at implementing community-level activities and interventions. However, one key informant expressed fear that while this is welcome, there is a real danger of community units focusing less on their core mandate of promoting health practices and creating a demand for health services, and focusing more instead on business activities and other competing engagements.

### Community health extension workers (CHEWs)

Unlike CHVs, CHEWs have formal training in health disciplines such as community health work, social work and nursing. Their role is to support and supervise the CHVs. They are required to undergo a five-day training course before formal engagement. CHEWs are paid by the counties.

### Community health committees

Community health committees offer supervisory and coordination support to CHVs and CHEWs. These committees undergo training, and are thereafter supervised and supported by the sub county health management team, with some occasional support from NGOs. Community health committees

are composed of 9–13 members elected by the community, usually retired professionals, opinion leaders, religious leaders and other respected members of the community.

A functional community unit is required to be anchored to a dispensary or health centre, and is expected to cover a population of 5000 people (requirement varies based on population density). A functional unit must have enough CHVs to cover the households (each CHV covering 10–100 households, depending on how close they are to each other). Each unit must have one or two CHEWs, and should have a community health committee that supports monthly dialogue days with community members.

### Challenges faced by primary care workers at community level

The Community Health Strategy (2006) has had some success in delivering PHC services. However, challenges have been identified, including a high attrition rate among CHVs, conflict of roles between facilities and CHVs and CHEWs. A 2014 study found that community health committees often failed to give supervisory support, frequently becoming dysfunctional after inauguration and training. Lack of motivation and incentives was cited as a major contributor (21). Interviews conducted with CHEWs, CHVs and community health committee members for this study found similar challenges. The inadequate supervision was attributed to lack of resources, inadequate training and heavy workload. Community health committee members felt demotivated, arguing that partners had neglected them, only paying/supporting CHVs.

### 4.3. Health care workers at dispensaries, maternity and nursing homes, and health centres

Dispensaries are mainly staffed by nurses, public health technicians and CHEWs. The nurses provide antenatal care, basic outpatient curative care and occasionally conduct normal deliveries. The CHEW

provides the link to the community, while the public health personnel support specific activities, also linked to the community. Health centres, on the other hand, are staffed by nurses, clinical officers and occasionally doctors, and provide a wider range of curative and preventive services, minor surgeries, maternity (normal deliveries), antenatal and postnatal care, among others.

Other staff in a typical health centre includes public health staff, pharmaceutical technologists, community oral health officers and laboratory technicians. Some may have dentists, pharmacists, radiographers, orthopaedic technicians, medical engineers, among others. Health centres with good infrastructure usually have more cadres of health professionals available.

Private maternity and nursing homes are mostly run by nurses and midwives, although some are operated by doctors and clinical officers. They offer a wide range of reproductive care, child welfare and some preventive and curative services. Table 16 gives an overview of health professionals in Kenya.

**Table 16. Overview of health worker numbers per 1000 population**

	Ratio	Source of information	Remarks
Number of physicians per 1000 population	0.21	Kenya Facts and Figures 2015 KNBS	2014
Number of nurses per 1000 population	1.65	Kenya Facts and Figures 2015 KNBS	2014
Number of CHVs per 1000 population	0.48	Ministry of Health HIS Annual Report 2012	2012

CHV: community health volunteer; HIS: health information system; KNBS: Kenya National Bureau of Statistics

## 4.4. Training of human resources for health in Kenya

HRH training covers pre-service and in-service training. The Kenya Health Sector and Investment Plan emphasizes the importance of linking training to the delivery of the Kenya Essential Package for Health.

### 4.4.1. Training institutions

All PHC providers, with the exception of CHVs, require formal pre-service training at approved institutions, and registration and licensing by the relevant regulators. There has been a steady increase in the number of institutions offering degree and diploma courses in health-related areas. Pre-service training is done broadly at two levels: universities with medical schools and approved medical training colleges. Universities typically offer undergraduate and postgraduate programmes, whereas the middle-level medical training colleges offer certificate, diploma and higher diploma programmes. The training is regulated by statutory bodies within the Ministry of Health and the Ministry of Education. The Commission for University Education and Technical Vocational Education and Training regulate the educational and training components, with the professional regulatory bodies under the Ministry of Health regulating technical content.

Presently, 11 universities offer undergraduate and postgraduate training in medicine and dentistry; six offer a pharmacy degree; and at least 22 are accredited to offer a degree course in nursing. Recent data indicate that the number of undergraduate medicine and surgery students in training increased from 2472 in 2011 to 3493 in 2015, while that for BSc Nursing increased from 1932 to 3409 over the same period. Overall, there was an increase in the number of medical students in training at bachelor's and master's levels from 6546 to 11 435 over the period (Table 17).

Both public and private middle-level institutions have approval to offer medical training at certificate, diploma and higher diploma levels. The government offers this level of training through the Kenya Medical

**Table 17. Number of students graduating from medical schools**

UNDERGRADUATE	2011/2012	2015/2016
<b>Medicine and Surgery</b>	2 472	3 493
<b>BSc Nursing</b>	1 932	3 409
<b>Dental Surgery</b>	218	320
<b>Environmental Health</b>	540	1 071
<b>Pharmacy</b>	298	998
<b>BSc Biochemistry</b>	501	399
<b>Subtotal</b>	5 961	9 690
<b>POSTGRADUATE STUDENTS</b>	585	1 745
<b>TOTAL</b>	6 546	11 435

Source: Kenya National Bureau of Statistics, 2016

Training College (KMTC) campuses distributed across the country, typically attached to public hospitals (level four and above). According to the Nursing Council of Kenya, there are 33 public nurse training institutions, of which 23 are Kenya Medical Training Colleges. In addition, there are 41 private colleges accredited to offer a diploma in nursing. Three universities offer both a diploma and a degree in nursing.

The Clinical Officers Council regulates training of clinical officers. There are 35 public, faith-based and private commercial colleges approved to train clinical officers. Of these, 19 are Kenya Medical Training Colleges. The diploma course takes 3 years. However, there are four universities that are now offering degrees in clinical medicine. Both the diploma and bachelor programmes require an additional year of internship. Specializations are offered at higher diploma levels, including in paediatrics, anaesthesia and ophthalmology.

All Kenya Medical Training Colleges are accredited to offer certificate and diploma courses in laboratory sciences by the Kenya Medical Laboratory Technicians and Technologist Board (KMLTTB). In addition, there are at least 13 other public and private institutions offering certificate and diploma courses in laboratory sciences. The certificate course takes 2 years, leading

to qualification as a laboratory technician, whereas the diploma takes 3 years, leading to qualification as a laboratory technologist. A degree programme takes 4 years, and is offered by at least five universities, according to the Kenya Medical Laboratory Technicians and Technologist Board.

#### **4.4.2. In-service training and continuous professional development**

Development partners work with the government to support in-service training aimed at enhancing the knowledge and skills of personnel. They often have a narrow focus, and aim to provide staff with the technical skills required to handle specific health problems. Such vertical training covers, for instance, malaria and HIV management, gender-based violence, infection prevention and control, emergency obstetric and neonatal care, integrated management of childhood illnesses, among others. The training is largely unregulated and usually not well coordinated, making it difficult to gauge their impact. However, a Ministry of Health training policy released in 2016 seeks to strengthen in-service training at university and middle level

training colleges by aligning content to population needs (22).

Professional associations are involved in continuous professional development (CPD). Some of the associations include the Pharmaceutical Society of Kenya for pharmacists, the Kenya Pharmaceutical Association for pharmaceutical technologists, the Kenya Dentists Association, Kenya Clinical Officers Association, and the National Nurses Association of Kenya. While membership to these associations is voluntary, regulators generally require active association membership, and demonstration of attainment of a certain minimum CPD points as a requirement for licensing. However, full enforcement of the CPD requirement for licensing remains problematic.

A recent training needs assessment by the Ministry of Health found a gap in training on leadership and management among PHC staff. The assessment recommended inclusion of health systems management in the HRH training curricula, and for training institutions to base their production on the gap analysis.



## 5. Planning and implementation: PHC service delivery guidelines and strategy

### 5.1. Norms and standards for service delivery

The HRH norms and standards guidelines defines the minimum number of health care workers of each cadre required for each facility level to guarantee adequate and effective provision of services expected of the respective levels (23). The document presents staffing requirements that consider staffing needs, population ratios and requirements for fixed staff numbers, and ratios for each level of care, including PHC facilities. The norms were developed to guide counties and the national government in investing in personnel.

The Kenya Essential Package for Health (KEPH) defines the minimum services to be provided to different age groups. Presently, dispensaries are expected to serve a population of 10 000 people (assumes an average of 30 outpatient visits per day based on past projections), with each health centre serving 30 000 people (roughly four deliveries per day). In addition, the Ministry of Health has plans to expand the availability of primary services to a level where all persons live within 5 km of a PHC facility (24).

### 5.2. Patient service charters

The patient service charter (PSC) guidelines require that PHC facilities display charters at visible points, indicating the services offered, obligations of the clients/patients, charges for specific services (specified as free for services that are not charged at the point of use), and the amount of time clients/patients should wait for specific services (23). In addition, the charters must be available in more than one language (depending on location), and must be displayed in each department for larger facilities. The guidelines also require that facilities have complaints and suggestion boxes, which must be opened at least bi-weekly. Facilities are also required to assess patient waiting times (at least every six months).

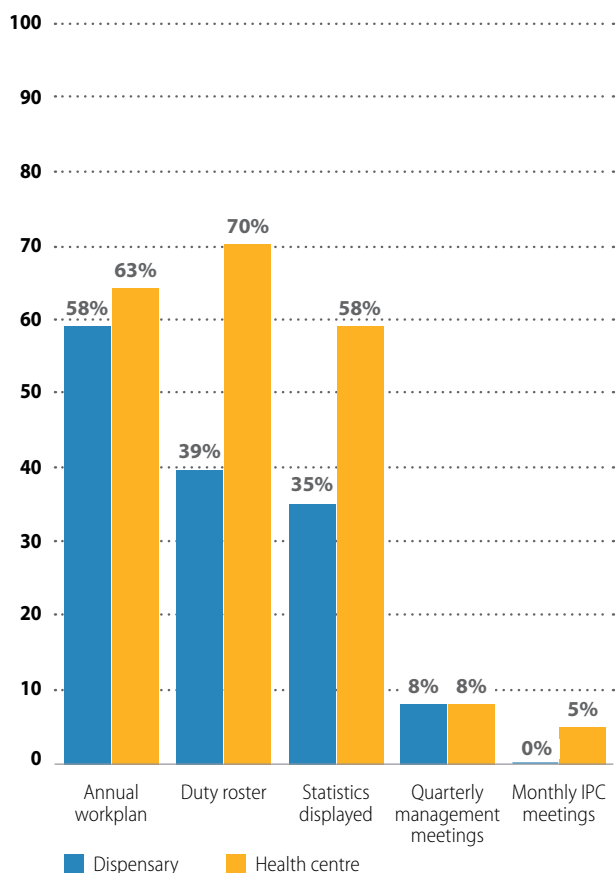
A 2014 Ministry of Health assessment of 66 primary health facilities (26 dispensaries and 40 health centres) found that only 33% of facilities had implemented service charters, with only 14% having departmental charters (20). The assessment found that only 9% of the service charters had contact details for a specific office/person, and that 11% had the charter available in two languages. Similarly, only 28% had suggestion boxes, with only 15% having a report showing the suggestions given and actions taken. None of the primary facilities had conducted an assessment of patient waiting times over the past six months.

### 5.3. PHC facility planning and management

The PHC facilities in Kenya are required to implement certain management practices. These include having annual work plans for their activities, having duty rosters for their staff, displaying certain statistics for members of the public to see, holding quarterly facility management committee meetings (which include community representatives) and regularly holding infection prevention and control (IPC) committee meetings. These requirements are outlined in various policies and guidelines, including the Health Sector Strategic and Investment Plan, the Legal Notice establishing the Health Sector Services Fund and the National Infection Prevention and Control Guidelines (Figure 6).

An 2014 evaluation of PHC facilities found that out of 66 facilities, a third had no annual work plans, and over 90% did not hold quarterly facility management committee meetings as required (20) (Figure 6).

**Figure 6. Percentage of facilities complying with key management requirements**



Source: The state of health services delivery: an assessment report for primary-level facilities

## 5.4. Guidelines for referral of patients

The referral system mirrors the structure of the Kenyan health system, with six levels, running from community level to specialized tertiary services (25). The Ministry of Health defines referral as a mechanism for comprehensively meeting clients' health needs by making use of resources beyond those available at the place where the clients sought care. The scope of referral services includes movement of clients, specimens, services and experts, and client parameters (movement of client information to higher levels for expert opinion). A key reason for developing referral guidelines was to promote the use of PHC, and reduce inappropriate use of specialist services.

Overall, evidence suggests a temporal increase in the utilization of PHC, and a concomitant reduction in the utilization of hospital services. The 2013 Kenya Household Expenditure and Utilization Survey (KHHEUS) reported a 30% reduction in the utilization of public hospitals, and a concomitant 52% increase in the utilization of public health centres and dispensaries between 2003 and 2013 (16). This was linked to the strengthened referral system that emphasized the use of lower-level facilities. The Kenya Health Policy requires PHC facilities to be sufficiently equipped to deal with emergencies and provide life-saving support to clients awaiting referral (1).

Despite the existence of referral guidelines, the Kenyan health system's referral mechanisms still function sub optimally, with major inadequacies from the community to the tertiary level. At the community level, CHVs face major problems in referring clients to facilities, mainly because of conflicts between CHVs and facility staff.

A situational analysis of the implementation of the Community Health Strategy found that health facility staff did not acknowledge referrals from CHVs, with most complaining of CHVs making "diagnoses" inappropriately at the community level before referring clients (*information from a key informant; data unpublished*). This led to conflicts between the facility staff and patients, who failed to understand why the CHVs and clinicians at the facility arrived at different diagnoses. The CHVs, on their part, also complained that the facilities never referred patients back to them after treatment, making it difficult to follow up. This poor linkage across facilities is a major barrier to effective referral. This problem is further compounded by the absence of integrated medical records mechanisms that would allow facilities to easily share key patient information during referral processes. Most PHC facilities do not have electronic medical records systems to allow this.

At higher levels, the main challenge revolves around self-referral by clients. A key informant confided that clients often ignore PHC facilities, preferring

instead to go directly to higher facilities, even for minor ailments. This results in inefficient use of the larger referral facility. Self-referral was attributed to historical factors, where PHC facilities were often poorly resourced, and would not have in stock even the most basic medicines. While the situation has changed considerably, there still remains a belief that hospitals offer a better option for any kind of ailment.

## 5.5. Availability of essential materials and commodities

PHC facilities in Kenya are primarily set up for preventive and promotive services, but also offer basic curative and diagnostic services. The Ministry of Health plans to work with counties to upgrade all primary facilities to offer delivery services. The Kenya Medical Supplies Authority is the public sector procurement and distribution agency for medicines and other health care supplies.

The Kenya Medical Supplies Authority supplies commodities based on orders received from the county health management teams. At county level, the county pharmacist is responsible for pooling orders from individual health care facilities, aggregating these, and placing orders directly to the Kenya Medical Supplies Authority. According to a key informant, the Authority presently supplies over 4400 PHC facilities across the country. The commodities and supplies are distributed directly to the facilities using a combination of in-house vehicles and outsourced transporters.

Reports continue to indicate frequent stock-outs of key commodities and supplies at primary facilities. The 2014 assessment of PHC facilities, for instance, found that only 48% and 27% of surveyed health centres and dispensaries, respectively, had 16 essential tracer drugs in stock at the survey<sup>(19)</sup>. Similarly, only half of the health centres and 19% of dispensaries had all the 16 essential tracer non-pharmaceuticals in stock. Expired drugs were also found at the facilities, with 15% of health centres and 12% of dispensaries reporting expiries at the time of the survey.

The 2013 Ministry of Health/World Health Organization-led SARAM report found that of 3676 dispensaries surveyed, 73% had amoxicillin suspension in stock (6). Other key medicines with fairly good availability were ORS (84%), zinc tablets (77%), vitamin A capsules (75%), paracetamol (77%) and artemisinin combination therapies (ACTs, 84%). The lowest availability was reported for benzyl penicillin injection (32%) and gentamicin injection (49%). For health centres, 75% had amoxicillin suspension, 89% ORS, 87% ACTs, 82% vitamin A, and 79% zinc tablets. Similarly, the lowest availability was for benzyl penicillin injection (40%) and gentamicin injection (65%).

On the other hand, primary facilities perform relatively well on immunization. The 2014 PHC facility assessment found that 94% and 92% of health centres and dispensaries, respectively, had all essential vaccines in stock, with all health centres and 96% of dispensaries having cold chain infrastructure (6). The facilities also performed well with regard to tracing immunization defaulters (86% of both health centres and dispensaries demonstrated having this in place). Injectable contraception was available in 92% of the surveyed facilities. The SARAM report also found that health centres were more ready than hospitals to provide essential immunization services (80%, compared to 71% for hospitals) (readiness defined as ability of a facility to provide expected services based on available inputs) (6). However, dispensaries were less ready compared to hospitals and health centres (65% of dispensaries were ready).

## 6. Regulatory processes

### 6.1. Overview

The definition of regulation includes social control and/or influences affecting providers (26). In health, regulation broadly refers to government oversight over the quality of services and products, and is typically focused on ensuring compliance with basic minimum standards. However, we define regulatory activities to include self-enforcement strategies aimed at encouraging facilities to improve quality beyond the minimum level. These include certification and accreditation schemes. While regulation remains, to a large extent, the role of the government in most places, certain functions have been delegated to professional associations in Kenya, including oversight over mandatory acquisition of CPD points for licensure purposes, and enforcement of ethical standards for professionals.

### 6.2. Regulatory guidelines and structures

This section examines regulatory mechanisms, guidelines and processes that govern public and private PHC facilities and practitioners in Kenya. The section is divided into four main subsections. The first subsection looks at regulation for compliance with basic minimum patient safety standards. The second subsection describes price and competition regulation. The third subsection looks at quality improvement beyond the minimum standards, with the final section describing consumer protection mechanisms.

#### 6.2.1. Regulating compliance with minimum patient safety standards

Historically, oversight of PHC services in Kenya varied, depending on the ownership of the facility. While private providers were regulated by semi-autonomous regulatory agencies, there were no objective enforcement mechanisms to ensure that

public facilities complied with minimum patient safety standards. This changed in 2016 through an official government gazette notice under the Public Health Act, which directed that all health care facilities (regardless of ownership) be henceforth inspected for compliance with minimum standards using a joint health inspections checklist (see Figure 7 and Table 18).

**Figure 7. The Joint Health Inspections Checklist (general and outpatient)**



**Table 18. Format of the Inspections Checklist**

Section name	Maximum score
1. Administrative information	Not scored
2. Health facility infrastructure	100
3. General management & recording of information	100
4. Infection prevention and control	100
5. Consultation services	100
6. Labour ward	100
7. Medical and paediatric wards	100
8. Theatre	100
9. Pharmacy	100
10. Laboratory	100
11. Radiology	100
12. Nutrition and food preparation unit	100
13. Mortuary	100
14. Findings and recommendations	(Total score=1200)

Like other types of facilities, PHC facilities are now subject to inspections using the Joint Health Inspections Checklist. This combines minimum standards for different health departments, including inpatient and outpatient medical services, pharmacy, laboratory, radiology and nutrition services. The tool was jointly developed by eight Kenyan regulatory agencies (see Box 2).

**Box 2. Health regulatory agencies that developed the Joint Health Inspections Checklist**

- Clinical Officers Council
- Medical Laboratory Technicians & Technologists Board
- Medical Practitioners and Dentists Board
- Nursing Council of Kenya
- Nutrition Council of Kenya
- Pharmacy and Poisons Board
- Public Health Officers and Technicians Council
- Radiation Protection Board

**Actions following regulatory inspections**

Following inspection, facilities are placed in one of five compliance categories, based on their overall score. Follow-up action is then determined by the compliance category. Follow-up actions range from notice for immediate closure of the facility (for facilities with a score of less than 10% or lacking essential licenses) to facilities not undergoing another inspection for two to three years (for facilities that perform exceptionally well, scoring over 75%). The idea behind risk categorization is to focus more effort on inspecting and supporting poor performers to improve patient safety (Table 19).

The joint inspections system was introduced to reduce costs resulting from different regulatory agencies traversing the country at different times, only to inspect their respective departments, and often enforcing standards that were not aligned

**Table 19. Inspection scores, compliance categories and follow-up actions for health care facilities**

Joint inspection score	Compliance category	Follow-up action
<10%/ No license	Non-compliant	Immediate closure of the facility
11–40%	Minimally compliant	Re-inspection in 3 months
41–60%	Partially compliant	Re-inspection in 6 months
61–75%	Substantially compliant	Re-inspection in 12 months
>75%	Fully compliant	Re-inspection in 2 years

to requirements from other regulators. Singular inspections placed a large administrative and financial burden on PHC providers, who had to spend considerable time hosting inspectors from different agencies.

**6.2.2. Regulating competition and price**

The PHC market in Kenya is characterized by a proliferation of poorly regulated facilities that operate along the spectrum of legitimacy, from properly licensed clinics to illegally operated facilities. A large number of private primary facilities operate at a subsistence level, and would appear to be barely solvent. Newer facilities open often, with a large number closing over relatively short periods of time. A census listing of health care facilities in three counties by the World Bank (Meru, Kilifi and Kakamega), for instance, compared findings against the master facility list (MFL) prepared a few years back, and found that out of 1115 facilities, 379 were relatively new (i.e. not included in the master facility list), and that 202 facilities on the List had ceased to exist. This points at a high turnover of health care facilities, mostly driven by excessive competition and poor business practices.

It is estimated that a large number of private primary facilities operate without proper registration and licenses, and are manned by unqualified staff. However, the actual numbers are unknown. The scale

and variances in the PHC market make it difficult for the under resourced regulators to enforce laws, and for consumers to distinguish quality services, especially in rural and low-income areas.

There is no price regulation in health in Kenya. However, in 2016, the Kenya Medical Practitioners and Dentists Board (KMPDB) published guidelines on fees for various services. The legal basis for the fees remains unclear, with providers charging varied fees based on the socioeconomic profile of their respective catchment population and insurance coverage status of the clients (higher fees charged for insured clients, with out-of-pocket payers paying less, particularly in lower-income areas). Similarly, prices of medicines are not regulated, although there is an agreed pricing structure that allows a 10% mark-up for manufacturers, 15% for distributors/wholesalers, and 33% for retailers and health care facilities. However, prices charged in practice vary considerably, depending mainly on the characteristics of the catchment area and client profile.

### 6.2.3. Promoting continuous quality improvement beyond minimum standards

Beyond meeting the basic minimum regulatory standards, PHC providers are required to engage in continuous improvement activities. This applies to both practitioners and health care facilities with regard to structure, operations, processes and outcomes.

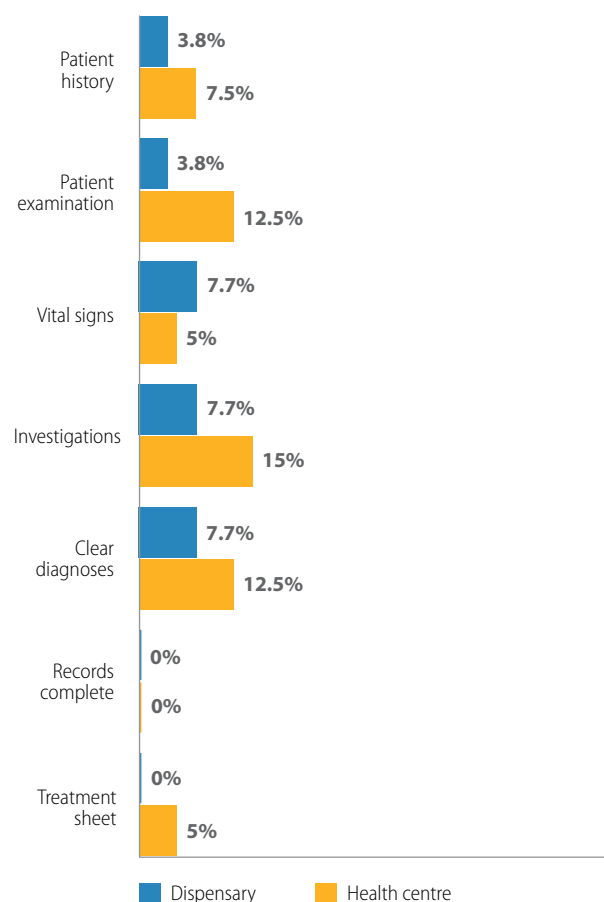
In 2013, the World Bank Group worked with the World Health Organization and Pharmaccess Foundation to conduct a nationally representative survey of patient safety at 493 Kenyan public, faith-based and private health care facilities. The study reported poor performance overall, particularly among the PHC facilities. The study scored facilities based on an objective scale of zero to three (zero being very poor patient safety compliance, and three, full compliance with patient safety standards) across five risk areas (1 – Leadership process and accountability; 2 – Competent and capable workforce; 3 – Safe

environment for staff and patients; 4 – Clinical care of patients; and 5 – Improvement of quality and safety). The study found that over 75% of all health care facilities did not achieve a score of more than one in any of the five risk areas, with the primary facilities performing relatively worse than larger facilities.

Another assessment conducted in 2014 by the Ministry of Health found that the majority of 66 PHC facilities performed poorly across different areas linked to quality of services (Figure 8).

Continuous quality improvement for practitioners is enforced through mandatory CPD programmes, which link directly to the licensure. Those in active practice are required to attain a certain minimum number of CPD points before getting their licenses

**Figure 8. Percentage of facilities that kept quality clinical records at primary facilities**



Source: The state of health services delivery: an assessment report for primary-level facilities

renewed. CPD points are awarded based on various criteria, including publication and attendance of key professional development activities, such as seminars and conferences. The CPD system applies to practitioners regulated by the Kenya Medical Practitioners and Dentistry Board and the Nursing Council of Kenya. This is discussed in more detail under section 4 (section on human resources for health).

As far as health care facilities are concerned, standards and implementation of continuous quality improvement interventions remains patchy and fragmented overall, mainly as a result of the existence of multiple quality management systems.

### ***The Kenya Quality Model for Health***

The national quality management framework for PHC facilities is the Kenya Quality Model for Health, a framework that incorporates evidence-based medicine, total quality management (TQM) and patient involvement to promote excellence in health services delivery. The framework was largely informed by experience from Asian countries such as Sri Lanka, where the implementation of step-wise quality improvement strategies has been successfully piloted. These included the 5S (sort, set, shine, standardize and sustain principle), continuous quality improvement (Kaizen) and TQM approaches, all of which were adopted as pillars for the Kenya Quality Model for Health.

The Kenya Quality Model for Health (previously called the Kenya Quality Model) was largely popularized by the National Hospital Insurance Fund, Kenya's social insurance agency. The Fund adopted the Kenya Quality Model in 2005, intending to make it a requirement for health care facilities wishing to be empanelled. However, implementation was never scaled up at facilities for two main reasons: first, there were no agreed standards in use for implementing quality improvement activities, and second, the National Hospital Insurance Fund did not have sufficient capacity to support facilities wishing

to implement the quality improvement activities proposed under the Kenya Quality Model framework.

### ***Safecare standards***

In 2013, the National Hospital Insurance Fund contracted Pharmaccess Foundation, with World Bank support, to build its capacity in quality management in order to support empanelled facilities to improve patient safety and quality of care through a step-wise certification system. The agreement followed an internal evaluation of National Hospital Insurance Fund's current services by Deloitte and Touché Consultants, which had identified quality management support as a major weakness. The initiative was designed to demonstrate the value of SafeCare in quality improvement at health care facilities, and help the national insurer to develop a system that would allow insurance rebates to be linked to quality (higher rebates to go to facilities with better quality).

As of August 2016, 79 personnel from the National Hospital Insurance Fund had been trained on Safecare, with 12 having had a chance to conduct independent assessment of quality standards, and develop quality improvement plans for health facilities. In total, 84 health care facilities had been assessed for quality standards and had all received detailed quality improvement plans, which indicated the most effective way of initiating continuous quality improvement activities.

Assessment using Safecare standards places facilities into one of five levels (level 1 being the lowest level, and level 5, the highest level, which entitles facilities to seek formal accreditation by internationally recognized accreditors such as the Joint Commission). Of the 84 facilities that were assessed, 55 were put in Safecare level 1 (star 1) and 24 in Safecare level 2 (Star 2). Five facilities were not placed in levels due to incomplete information. Sixty of the 84 assessed facilities were primary facilities (8 dispensaries and 52 health centres).

#### 6.2.4. Consumer protection

The Kenyan health care sector does not have specific legislation on consumer protection. However, the country has a law (the Consumer Protection Act of 2012), whose mandate is to outline consumer rights across sectors, including consumer redressal and compensation.

In health, matters related to consumer protection are handled directly by the regulatory agencies. For health care facilities, complaints are lodged directly with the respective regulator governing the facility or practitioner in question. The Kenya Medical Practitioners and Dentistry Board, which is the primary regulator of health care facilities, has an elaborate mechanism for receiving and processing claims.

The Board's roles include conducting preliminary inquiries into complaints of professional misconduct and medical malpractice, holding tribunal meetings over the same, and conducting inquiries into the health and fitness of practitioners (27). The Board's disciplinary authority is conferred by the Medical Practitioners and Dentists Disciplinary Proceedings Rules under the Medical Practitioners and Dentists Act of 1979.

The Kenya Medical Practitioners and Dentistry Board launched a new "Code of conduct and discipline" in 2012, with the primary objective of streamlining and speeding up the processing of malpractice cases. The new Code directed that cases be processed to completion within six months, which was an adjustment on the previous limit of up to one year.

The Code gave the Board the authority to suspend errant practitioners and institutions for six months (for substandard performance) and one year (for malpractice).

On receiving complaints from the public, the Board convenes a meeting (referred to as the Preliminary Inquiry Committee). The Preliminary Inquiry Committee is the primary gatekeeper of the entire process, conducting pre-trial screening of complaints to determine merit. While a negative recommendation by the Preliminary Inquiry Committee does not stop a complainant from seeking further legal redress, it may impact on the subsequent rulings, if the findings of the Kenya Medical Practitioners and Dentistry Board is presented by the defendant as extra evidence during a court trial. Serious complaints that have merit lead to the convening of a full board tribunal, which listens to the case again, and decides accordingly. In extreme cases, a practitioner may have their license revoked, and face possible recommendation for prosecution.

Findings from the Board's processing of malpractice claims feed into the judiciary process. Kenyan law courts recognize the Board's process, and will often await tribunal hearings before taking on cases of medical malpractice. There is judicial precedence against skipping the Board's process and going directly to the courts; the judicial system generally prefers that complaints are first heard by the Board, and have, indeed, referred cases back to the Board in the past.



## 7. Monitoring and information systems

### 7.1 Overview

Kenya established a national health information system (HIS) in the early 1970s to improve service delivery and reporting. The goal was to promote collection of good-quality health data that is essential for evidence-based planning and decision-making processes. The information management systems have evolved since then, from paper-based to web-based electronic systems. The government supplies facilities with formal registers and summaries for the collection of key health data.

### 7.2 The District Health Information Software (DHIS-2)

The District Health Information Software 2 (DHIS-2) is the national health information system. It was developed in 1998 by the health information system programme in South Africa and implemented in Kenya in 2010. The web-based database is used for the collection and dissemination of routine and non-routine health data. DHIS-2 was introduced to address challenges faced by its predecessor, the file protocol transfer (FTP) system (28). Some of the challenges included lack of validation mechanisms and time lags between data reporting and receipt (29). These systems issues led to a highly fragmented HIS that did not guarantee quality health data.

DHIS-2 is cloud based, and is able to capture individual facility-based information. Given that most PHC facilities lack computers, the data from facilities is filled out every month on paper reports and taken to the county to be keyed in onto the server. Despite its success, DHIS-2 still faces numerous challenges, including poor Internet connectivity across the country, few skilled personnel, and the changing roles of national and county governments (29).

### 7.3 Information systems

#### 7.3.1 Information systems for vertical programmes

Monitoring and evaluation (M&E) of the activities of vertical programmes is done against the programme-specific strategic plans developed at the national level. The various departments and programmes have policies to govern M&E activities. Some of the programmes target areas such as the following.

##### 7.3.1.1. HIV/AIDS

In Kenya, the National AIDS Control Council (NACC) does multisectoral HIV/AIDS reporting. Data from communities are collected using the community-based programme activity report (COBPAP). COBPAP was developed in 2005 and has been integrated into DHIS-2. Organizations providing HIV services at the community level provide quarterly reports to the constituency AIDS control coordinator using the COBPAP at the county, information is keyed in onto the DHIS-2 platform.

The National AIDS and STI Programme (NASCO) deals with reporting within the health sector. Facility data are collected on two registers, namely MOH 711 and MOH 731. The summary is transferred to DHIS-2 at the county level by the county health records information officer.

##### 7.3.1.2. Tuberculosis (TB)

In the National Tuberculosis, Leprosy and Lung Disease Programme (NTLD-P), reporting is mainly done through TIBU. TIBU is a partnership between the Ministry of Health and the United States Agency for International Development (USAID) Kenya, Iridium interactive, Safaricom and Tangazo Letu. Through the platform, real-time reporting on TB case-finding, incidence of multidrug resistance (MDR) and mapping of other TB-related issues is made possible. Primary data are collected with mobile computer

tablets and electronically transferred to the NTLD-P. To avoid parallel reporting of data around TB, TIBU is directly linked to the DHIS-2. TIBU also facilitates support for MDR-TB patients and TB logistics planning for commodities. Mobile money transfer payments are also made to a TB or laboratory coordinator to cater for costs incurred during supervision and quality checks.

### 7.3.1.3. Maternal and child health

At the community level, CHVs fill out the community health worker logbook (MOH 514) daily, and submit it to the CHEW, who then summarizes community unit data on cases treated or referred in a monthly report (MOH 515). The CHEW submits the report to the link primary facility.

On receiving the reports, the facility in-charge or health records information officer (HRIO) compiles the summaries and the community unit reports for submission to the sub county on a monthly basis (Table 20). The information is shared with the facility's committee members. This informs requests for supplies and monitoring of health services. At the sub county offices, the sub county health records information officer (SCHRIO) collects data from all facilities and enters these into the DHIS-2. The main challenge is inaccurate manual reporting from PHC facilities, blamed on excessive workload.

Primary data collection reporting tools used at the facility under this category include the following:

**Table 20. Registers and summary forms, and tally sheets**

Register and summary	Code
Diagnostic index card	MOH 268
Outpatient under 5 years	MOH 204A
Outpatient over 5 years	MOH 204B
Inpatient register	MOH 301
Maternity register	MOH333
Antenatal care register	MOH405
Postnatal care register	MOH 406
Immunization register for children	MOH 510
Child welfare clinic register	MOH511
Daily activity (family planning) register	MOH 512
Community health worker household survey	MOH 513
Community health worker service delivery logbook	MOH 514
Community health extension worker monthly report	MOH 515
Immunization services uptake summary	MOH 710

### Tally sheets

Tally sheets	Code
Diagnostic disease index	MOH 268
Under-5 years daily morbidity tally sheet summary	MOH701A
Immunization tally sheet	MOH 702
Child Health and Nutrition Information System tally sheet	MOH 704
Under-5 years daily outpatient morbidity summary sheet	MOH 705A
Environmental health services	MOH 708
Immunization and vitamin A summary sheet	MOH 710
Integrated tool for reproductive health (RH), HIV/AIDS, malaria, TB and child nutrition health facility summary	MOH 711A
Integrated tool for RH, HIV/AIDS, malaria, TB and child nutrition district summary	MOH 711B
Semiannual health facility services inventory form	MOH 715
Monthly workload report for hospitals (service workload for all areas)	MOH 717
Inpatient morbidity and mortality summary sheet	MOH 718

Source: Health sector indicator and standard operating procedures manual for health workers, May 2008

## 7.3.2 Sectorwide information systems

### 7.3.2.1 Human resource information system

Kenya's health workforce is managed by several databases that aid in tracking supply, deployment, regulation and payment of the various cadres. The human resource information system (HRIS) includes, first, the Kenya health workforce information system (KHWIS). KHWIS was developed in 1997 with support from Emory University. The database initially targeted nurses, but was later scaled up to include doctors, dentists, clinical officers, laboratory technologists and technicians. In 2012, KHWIS was handed to the Ministry of Health to provide information on public sector health professionals' deployment. Information carried includes the date of first appointment, previous promotions, years worked at a station, the last work station and the area of deployment. All health care personnel, including those working at PHC facilities, have their key information mapped in the system.

The second system is the regulatory human resource information system (rHRIS), a database set up to enable regulatory agencies to produce data efficiently on their respective health workforce. This platform provides information on a student's training and internship, professional registration examination, upgrade, specialty skills, and licensure and accreditation. rHRIS is linked to other systems such as the master facility list, continuous development systems, financial systems and integrated human resources information system (iHRIS). Upon enrolment in a training institution, the student is indexed and the information is updated during licensing and subsequent renewals.

The third system is iHRIS Manage, which obtains health workforce data through staff payroll returns provided by facilities. Through integration of iHRIS with the master facility list and integrated personnel payroll data, the database captures data on cadre, pay group, gender, deployment and county.

Finally, the health workforce payroll data are captured on the integrated personnel payroll data,

a non-web-based database and government health resource information system (GHRIS) a web-based database. These databases capture information on the pay station and pay grade of the health workforce.

### 7.3.2.2. Master facility list

For regulation purposes and mapping, the master facility list was developed to map out every health facility in the country. Each facility is accorded a unique code for identity. At the sub county level, the sub county health records officer is responsible for registration of new facilities, updating of facility details, ranking of facilities, managing community health units and appointment of facility officers. Facility officers can read only the master facility administration system. During registration, basic facility details such as name, type, ownership, contacts, services offered and regulation details are captured. In addition, the geolocation details are also recorded.

The county health records information officer has to approve each time new facility information is entered or updated. The officer is also tasked with rejection or approval of facility updates, publishing or unpublishing facilities and management of the subcounty health records officer. At the national level, the national administrator is in charge of system set-up and service catalogue management.

## 8. The way forward and policy considerations

Kenya's PHC system is presently undergoing a major transformation, resulting from the constitutionally mandated devolution of health services delivery. The country is in the process of implementing relatively new and untested mechanisms, ranging from policy and regulatory interventions, to health care

financing models. However, more work is required to understand the best mechanisms for supporting PHC, and the impacts on population health indices. **Table 21** gives a brief summary of the key areas to be addressed in the different areas moving forward.

**Table 21. Strategic areas to address in strengthening PHC in Kenya under devolution**

#	Component	Areas for intervention/policy solutions
1	Governance of PHC	PHC facilities are formally governed by facility committees, which include community representatives (voluntary roles). However, past studies have shown the committees to be active only where user fees are collected, as they help plan and monitor the use of the funds. With user fees recently abolished for PHC, what new roles can the committees be given to encourage them to participate in facility governance?
2	Financing PHC services	PHC facilities were previously funded directly through the Health Sector Services Funds (HSSF) to bypass the inefficiencies of funding through the districts (i.e. funds would be diverted from PHC to curative services). However, the recent enactment of the Public Finance Management Act abolished direct facility funding, creating the risk of PHC facilities being underfunded as before. What mechanisms/strategies can be put in place to ensure that this does not happen as it did in the past?
3	Human resource for health (HRH) for PHC	HRH management has been devolved, raising concerns over how well the counties can manage such a delicate workforce, and ensure equitable distribution and appropriate retention strategies. Most counties are struggling with problems of industrial action, as health care workers express dissatisfaction, and demand that HRH be recentralized.  What strategies can be employed to strengthen county capacity to manage HRH? And what checks and balances can be added to ensure that counties adhere to the national norms and standards for the different staff mix and expertise required to deliver PHC services?
4	PHC service delivery	Counties that previously housed provincial referral hospitals are now overwhelmed, as they use their funds to finance these large facilities that cater to the needs of large numbers, most from other counties. They incur high tertiary care expenses, thereby diverting resources from PHC. What interventions can help strengthen PHC services in such counties?  Most counties report massive stock-outs of key commodities, particularly medicines. This is because counties now have to determine their needs and place orders, despite the challenges faced, including insufficient capacity and inadequate funding. What strategies can be deployed to promote commodity security under the newly devolved system?
5	Regulating PHC services	Kenya recently adopted a new regulatory enforcement mechanism, the Joint Health Inspections system, where facilities are inspected using objective uniform criteria, and where sanctions deployed for non-compliers vary, depending on performance levels. However, with devolution of health services and concomitant reduction of funds by the national government, it has become apparent that regulatory functions must, somehow, be shared between the national and county governments. What would be the most effective mechanism for sharing this function, without compromising regulatory standards?
6	Monitoring and managing PHC information	Kenya has faced challenges in harmonizing health information across sectors (public and private) and information components (e.g. master facility list number, licensure status), human resource information and data on health indicators. This results in poor coordination and suboptimal planning. What strategies can be devised to ensure that the previous challenges around data fragmentation are not replicated after devolution?

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