Kenyan Healthcare Sector

Opportunities for the Dutch Life Sciences & Health Sector

September 2016

Task Force +Health Care
Dutch platform for the life sciences & health sector

Kenya Healthcare Federation

Study commissioned by the Embassy of the Kingdom of the Netherlands in Nairobi

Kenyan Healthcare Sector

Market Study Report: Opportunities for the Dutch Life Sciences & Health sector

Study commissioned by the Embassy of the Kingdom of the Netherlands in Nairobi

September, 2016

Top 10 Reasons

Why Kenya is interesting for the Dutch Health Sector

1. The Dutch have a good Reputation: *The Netherlands has a good reputation in Kenya and is the only country in Europe with which Kenya has a positive trade balance (mainly due to the flower business). See page 10.*
2. Long-term Dutch support in improving Kenyan Healthcare sector: *On top of this, Kenya has been one of the few African countries which for many years received (financial) support from the Netherlands for strengthening the healthcare sector. The Netherlands has always been committed and involved! See page 81.*
3. Strong Dutch presence in Kenyan Healthcare: *Partly as a result of the latter, several Dutch organisations have already build an impressive track record and the Netherlands already invested a lot in health in Kenya. See text boxes on pages 24, 41, 42, 46, 47, 50, 81.*
4. Renewed Dutch focus on Kenya: *Recently the Dutch Topsector LSH has marked East Africa (Kenya being considered as central hub) as one of the three focus areas (besides US and China). Meaning* ***continuous support*** *for Dutch health organisations doing or willing to do business in Kenya. See page 10.*
5. Decentralisation of Kenyan Healthcare sector: *In 2013 Kenya reformed the healthcare system and sector with the so-called 'devolution', meaning that the 47 counties gained a relatively high degree of autonomy. See pages 22, 25, 26, 27, 55, 57.*
6. Kenya is the Healthcare Frontrunner in East Africa: *Kenya is widely regarded as thé business hub in East Africa and eager to adopt innovations while functioning as a healthcare testbed for the region. See pages 46, 49, 50.*
7. Huge Potential for Growth: *Although being a frontrunner in the region, only 25% of Kenyans are covered by a health insurance scheme. Innovative financing solutions are needed and access to healthcare needs to be secured. See pages 28, 41, 61.*
8. Priority on Capacity building: *Moreover, due to the low healthcare coverage both the public and private sector are expanding their efforts to strengthen the health infrastructure and overcome the shortage of health workers. See pages 23, 32, 34, 41, 47, 51, 59.*
9. Fast growing private sector: *Private sector is responding to an increasing demand for quality healthcare living up to Western standards and budgets for 'high-end branded' equipment to attract customers. There are many investments and influences coming from India. See pages 34, 38, 58, 59.*
10. High-volume low-cost concepts: *Due to the above-average Indian presence in Kenya many low-cost high-volume concepts are introduced and operable in Kenya. This principle provides opportunities for comparable Dutch smart solutions. See page 60.*

Executive Summary

About this report

This report was commissioned by the Embassy of the Kingdom of the Netherlands (EKN) in Nairobi, Kenya. It is produced by Kenya Healthcare Federation (KHF) and Task Force Health Care (TFHC) and sets out a high level analysis of the healthcare sector in Kenya, business opportunities for organisations active within the Dutch Life Sciences & Health sector, and recommendations for the EKN on how to increase the involvement of the Netherlands in the Kenyan Healthcare sector.

Methodology

This report is based on a desk research and a fact-finding visit to Kenya to gain insights from key stakeholders in the Kenyan healthcare sector and position the Dutch Life Sciences & Health sector as a potential valuable partner. Annex 1 provides an overview of the contacts during this week.

A Brief Introduction to Kenya

Kenya is one of the 6 countries of the East Africa Community (EAC) and is widely regarded as the business hub for East Africa. The economy is growing, the workforce is strong and capable, the population young and educated, and English being one of the national languages (besides Kiswahili). Together with the economy, Kenya's middle class (44.9% of total population) and the demand for quality healthcare is on the rise.

Kenya has an estimated population of 46 million with an average population growth of 1 million per year, with a median age of 19 years and a high (although declining) fertility rate of 4.4 children per woman. The country is experiencing a population flow from the rural areas to the city centres and currently about 25% of all Kenyans live in an urban setting.

Kenya's burden of disease has historically been mostly focused on communicable diseases. However, recent research shows a large and fast increase in the prevalence of non-communicable diseases such as cancers and cardiovascular diseases. This is mainly attributed to life style changes of Kenyans.

In 2010, Kenya adopted a new constitution which created a devolved government which established 47 counties which are governed by their own governments and have a relatively high degree of autonomy when it comes to budget allocations – including for healthcare.

Kenya's Healthcare System

The Kenyan healthcare system can be split into three subsystems, being the Public Sector, Commercial Private Sector, and Faith Based Organisations (FBOs). The Public Sector is the largest in terms of the number of healthcare facilities, followed by the Commercial Private Sector and the FBOs. There is a large disparity among these health facilities, especially in rural areas.

The Total Health Expenditure (THE) has increased over the years by about 33% in a 2 year timeframe to KES 234 billion or USD 2,743 million in 2012/13. Health financing is mixed and receives funds from taxation, the National Health Insurance Fund (NHIF), private health insurances, employer schemes, Community Based Health Financing (CBHF), user fees (out of pocket expenses), development partners and Non-Governmental Organisations (NGOs).

The government spending on healthcare is approximately 6% of GDP which is low compared to other countries in the region. Approximately 25% of the Kenyans are covered by a public, private or

community-based health insurance scheme. The amount of Out Of Pocket (OOP) spending remains high, leading a lot of people into poverty and posing a barrier to access healthcare. Especially at the base of the pyramid, people do not save or prepay for healthcare or are not able to do so.

In 2013, the public health services (primary and secondary level) moved from the national government and Ministry of Health (MOH) to the county governments. Since then, the MOH is limited to providing support and technical guidance to the counties and is responsible for regulating the health sector and the counties for providing the health services. The MOH is guided by the Kenya Health Sector Strategic Plan (KHSSP) 2013-2017 which is prepared for every four-year election cycle. In August 2017, Kenya has its national and county election after which the 5 year period will lend a new wave of Public Private Partnerships in the health sector as the public sector acknowledges that they cannot improve the health system without partnering with the private and FBO sector.

Human Resources for Health (HRH) is still managed at national level. Kenya has a high health worker shortage, mostly affecting the rural areas. Most health workers are employed in the private sector, in which the competition for doctors drives the costs of healthcare. Challenges are improving the capacity of training, efficiency of health workers, and reducing the so-called brain-drain where trained health workers look for greener pastures in the private sector and abroad.

Business Opportunities

The Kenyan healthcare sector is experiencing exciting times. The middle class in Kenya has been growing, together with the economy, increasing the demand for quality accessible health services. The private sector has been vibrant with increased investments. At the same time, 32.5 million Kenyans lack any form of basic insurance and are treated in ill-equipped and poorly staffed facilities. Kenya's health sector faces enormous deficiencies in coverage and infrastructure. This study identified business opportunities for the Dutch Life Sciences & Health sector in the following areas:

Medical Devices

In the public, private and FBO sector, there is a demand for quality, affordable medical devices. Centralized purchasing and procurement are often used to obtain economies of scale. Especially in the private sector, there is a rising demand for western standard therapeutic and diagnostic equipment. There is also a demand for supply chain solutions involving knowledge and technology to effectively distribute pharmaceuticals and medical supplies. The recent enactment of the Special Economic Zones Act (2015-SEZA) presents an opportunity to invest in manufacturing plants for medical supplies to the region.

eHealth

Health and ICT are slowly becoming more interconnected in Kenya. Kenya has proven to be a frontrunner in innovative ICT solutions in general and also in the health sector. It is the only African country with a comprehensive eHealth strategy and the only country in the world with a multi-billion USD turnover of mobile money (mPesa) payments that is more and more being linked to paying for healthcare services. Telemedicine, Health Management Information Systems, Hospital Information Systems, eLearning and serious gaming are gaining increased attention.

Training and Education

The shortage of health workers poses great opportunities for solutions contributing to effective capacity building. Curriculum development, training content, problem-based learning and eLearning are examples of much needed expertise to strengthen human resources for health. Next, hospital management skills is increasingly viewed as a separate discipline needed to be invested in.

Hospital Build

Both the public and private sector are investing in the renewal, expansion or development of new hospitals, clinics and reaching out to rural areas (with additional mobile solutions). Expertise on hospital build brings knowledge and leverage targeting investors and donors.

Health Financing

Although Kenya is a frontrunner in the region in terms of economic and technical developments, the country still only has a prepaid healthcare coverage of about 25%. 75% of the Kenyan population does not have any health (insurance) cover and relies fully on out of pocket expenses. A lot can be won by innovative investments in this area.

Next steps

This market study report marks an important step to further strengthen the bilateral healthcare relation between Kenya and the Netherlands. Task Force Health Care has proposed a roadmap to the Embassy of the Kingdom of the Netherlands to further connect Kenyan with Dutch healthcare stakeholders and build towards sustainable healthcare relationships. Please get in touch with TFHC, KHF, or the EKN Nairobi to be involved.

More information

Kenya Healthcare Federation
Rosami Court, 1st floor, Muringa Road
Off Elgeyo Marakwet rd
Kilimani
P. O. BOX 37929-00100

Phone: +254 (0)702 249 853
Email: admin@khf.co.ke
Web: www.khf.co.ke

Task Force Health Care
WTC The Hague
Prinses Margrietplantsoen 33
2595 AM, The Hague
The Netherlands

Phone: 0031 (0) 70 21 99 000
Email: info@tfhc.nl
Web: www.tfhc.nl

Table of Content

I. Introduction & Background

The African continent is on the rise. Despite the fact that many countries still carry the label of "developing county", the private sector is growing and the ambitions for private sector development are high. Besides this, the procurement of international development institutions is a billion dollar market. The East African region, in particular, has proven to be an attractive area for Dutch companies, knowledge institutes and Non-Governmental Organisations that have been active in the region for many years. An improved collaboration between the Dutch government and Dutch private sector will contribute to the business activities in the East African region.

Kenya is a stable and relatively well organized country in the East African region. However, the necessity and need for increased sustainability, accessibility and improvement of quality care in the health system is still high. The healthcare sector falls for a large part in the public domain in which the Government of Kenya is very dependent on external donor funding. The Dutch life sciences & health sector has a lot of knowledge and healthcare solutions that might contribute to the improvement of the development of the Kenyan healthcare sector.

From Aid to Trade

Kenya has been identified as a transition country by Dutch Minister Ploumen. This means that the "Aid to Trade" agenda will be implemented by the Dutch Government, and therefore the aid agenda will be phased out and replaced by a trade agenda that will be based on a broad trade- and investment relationship. In this regard, the Netherlands Enterprise Agency (RVO) and the Embassy of the Kingdom in the Netherlands (EKN) in Nairobi, endeavour to get a broader understanding of the various economic sectors in Kenya with the main aim of informing Dutch companies and businesses and to steer interventions from the Dutch government.

The total volume in trade between Kenya and the Netherlands has seen considerable growth over the period 2006 – 2015. The Netherlands is the 5th export destination for Kenyan products. Exports grew from €619 million in 2006 to €937 million in 2015. Most important Kenyan exports are agri-products, flowers and vegetables, which accounted for 36% of exports in 2015. It is interesting to note that the Netherlands is the only country in Europe for which Kenya has a positive trade balance (!) which can be mostly attributed to the flower exports. The Netherlands has therefore a positive connotation among the Kenyans. Kenyan imports from the Netherlands increased from €268 million to €295 million in the same period. The largest import products are machinery and transportation material (31% of imports).

Foreign direct investments from the Netherlands in Kenya have risen tenfold from €63 million in 2006 to €690 million in 2014. Kenyan investments in the Netherlands are low and averaged around €15 million over the period 2009-2014.[1]

East Africa: A Focus Area of the Dutch Topsector Life Sciences & Health

In November 2015, the Dutch Topsector Life Sciences & Health (LSH) marked three focus countries/regions for the period of 2016-2017.[2] The East African region is one of these focus areas (together with the USA and China). The three LSH focus countries/regions are receiving special attention from the Topsector LSH with an integral approach for export, acquisition and R&D plus innovation. The timing of this market study is perfect to create a unified consensus on follow up steps to connect the Dutch LSH sector to the Kenyan business opportunities in health.

[1] Netherlands Embassy, Nairobi (2016) Economic Fact sheet, mimeo.
[2] http://www.health-holland.com/news/2015/11/international-strategy

About this report

This report was commissioned by the Embassy of the Kingdom of the Netherlands (EKN) in Nairobi, Kenya. It is produced by the Kenya Healthcare Federation (KHF) and Task Force Health Care (TFHC) and sets out a high level analysis of the healthcare market in Kenya, business opportunities for Dutch companies and organisations and recommendations for interventions and support from the EKN.

II. Methodology

In order to make this market study as relevant as possible for the Dutch Life Sciences & Health sector, Task Force Health Care and Kenya Healthcare Federation have taken three important steps.[3]

i. Survey amongst the Dutch Life Sciences & Health sector

Task Force Health Care (TFHC) conducted a survey among Dutch organisations active within the Life Sciences & Health sector to identify the interest in the Kenya Healthcare Market and the main (perceived) opportunities and challenges. This was an important step to add more focus in the desk research, fact-finding visit to Kenya, the writings of this report and recommendations provided to the EKN.

ii. Desk research

The desk research targeted relevant health policies and other health information related reports.[4] Some challenges were encountered in obtaining recent and accurate data. The written data on the Kenyan health sector has proven to be very scattered and sometimes outdated. For some statistics the latest data available was obtained in the year 2006 and can therefore not be classified as current. Furthermore, some information on certain sub-sectors was simply not available from a trusted source. In addition, some sources were reporting different data. It was therefore crucial for to cross check data provided in reports and also to corroborate data during meetings with Kenyan Healthcare stakeholders whenever appropriate.

iii. Fact-finding visit to Kenya

In important element of the market study was the fact-finding visit to Kenya, whereby two delegates of the TFHC jointly with KHF, visited Nairobi to gain insights from key stakeholders in the Kenyan healthcare system. The fact-finding visit (one week) included 14 meetings and 3 round table luncheons with representatives from the public sector, private sector and development partners. The 3 roundtables covered the following thematic areas: 1) eHealth, 2) Health Infrastructure and 3) Health Partners with a Dutch connection.

Meetings were semi-structured in terms of following an open-interview method with a discussion guide. Most interviewees were very open on their current operations but a bit guarded when providing more information on their strategic directions and development plans moving forward. Therefore it is likely that the opportunities and near future plans for especially the private sector (for competitive reasons) are not 100% complete. However, this report captures the overall lines of expansion and strategic direction Kenya is taking in the health sector currently and in the near future.

Next to gaining valuable market information (including cross checking data and developments) these meetings were used to create awareness and – if appropriate – position the Dutch Life Sciences & Health sector as a potential valuable partner. A full list of contacts during the fact-finding week is provided in Annex 1.

[3] PharmAccess participated in this study by providing information about the market and explaining their experiences and links with partners in their network.
[4] See Literature List for the relevant health information reports and policies used for this study.

III. Dutch Life Sciences & Health sector interest in Kenya

Task Force Health Care (TFHC) conducted a survey among Dutch organisations active within the Life Sciences & Health sector to identify the interest in the Kenya Healthcare Market and the main (perceived) opportunities and challenges. The results show that (at least) a dozen organisations are already active, mainly in the field of 'Health Systems Strengthening' (consultancy, project implementation), 'Medical Equipment and Supplies' (imaging, beds, medical/hospital supply kits, haemostats), and 'Laboratory' (pathology lab equipment, mobile chemical analysers), E-Health (mobile payments, training), 'Rehabilitation', 'Training & Education' and 'Pharmaceuticals' (supply chain, procurement).

Next, (at least) a same amount of organisations are interested (and some already exploring) opportunities in Kenya, focussing on Hospital Build, Medical Devices, Health Systems Strengthening and Health Financing.

Survey respondents label the expanding population, being the economic and logistic hub for the region, government communicating focus on improving healthcare, the devolution's impact on the supply chain, the need for efficient training methods, and the number of hospitals being build and equipped as reasons why they see Kenya as a target market. However, the respondents also perceive a lot of barriers to enter the market, being high (import) taxes, high costs of transport, scarce financing possibilities, lack of funding in the public sector, a price-oriented market with big and established competition (strong influence from India, rest of Asia and US), lack of qualified (technical) personnel for local technical service, and immature leasing legislation. Finding the right business partner is often mentioned as the key to success, but also perceived as a big challenge.

Glossary of Terms

ANC	Antenatal Care
CBHF	Community Based Healthcare Financing
CBO	Community Based Organization
CHAK	Christian Health Association Kenya
CHE	Current Health Expenditure
CLC	Community Life Center
CS	Cabinet Secretary
DMS	Director of Medical Services
EAC	East Africa Community
EmOC	Emergency Obstetric Care
FBO	Faith Based Organization
GDP	Gross Domestic Product
GOK	Government of Kenya
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information Systems
HR	Human Resources
HSSF	Health Sector Services Fund
ICT	Information Communication Technology
KCCB	Kenyan Catholic Conference of Bishops
KHF	Kenya Healthcare Federation
KHPF	Kenya Health Policy Framework
KNH	Kenyatta National Hospital
KHSSP	Kenya Health Sector Strategic Plan
MEDS	Mission of Essential Drug Supplies
MFL	Master Facility List
MOH	Ministry of Health
NGO	Non-Governmental Organization
NHA	National Health Accounts
NHIF	National Hospital Insurance Fund
NHSSP	National Health Policy Framework
NPISH	Non-profit institutions serving households
OOP	Out of Pocket
OVC	Orphans and Vulnerable Children
PPP	Public Private Partnership
PS	Permanent Secretary
SAGA	Semi-Autonomous Government Agency
SME	Small and Medium Sized Enterprise
SUPKEM	Supreme Council of Kenyan Muslims
TB	Tuberculosis
TFHC	Task Force Health Care
THE	Total Health Expenditure
TPA	Third Party Administrator
VDS	Vision 2030 Delivery Secretariat
WHO	World Health Organization

1. An Introduction to Kenya

1.1. Geography and Demographics

Kenya is one of the six countries in East Africa that form part of the East Africa Community (EAC), a regional intergovernmental organization of 6 partner states: The Republics of Burundi, Kenya, Rwanda, South Sudan, Uganda and the United Republic of Tanzania. The EAC headquarters is in Arusha (Tanzania) and in the EAC the partner states are widening and deepening cooperation in a regional integration process to increase the economic development in the region.

Kenya encompasses a total area of 582,650 km2 and the country is positioned on the equator of Africa's East Coast.[8] The borders of Kenya are shared with five other countries, being Uganda, Ethiopia, Somalia, Tanzania and South Sudan.

Summary Demo- and Geographics Kenya[5]	Statistics
Population (in millions)	46[6]
Population living in urban areas	25%
Population under 15 years	42%
Population over 60 years	4%
Median age (years)	19
Life expectancy 2014 (years)	61
Female	50%
Total fertility rate (per woman)7	3.9
Under 5-year mortality 2014 (per 1000)	52
Gross national income per capita (in USD)	2250

Table 1: Demo- and Geographics of Kenya

According to the Kenya Population and Housing census, Kenya's population in 2009 was estimated to be 38,610,097. Five years later in 2014 the Kenyan population stood at 45,010,056 of which 42.1% are children under 14 years of age. This means that since 2009 the Kenyan population has shown an annual consistent growth of 1 million people. It is estimated that in 2020 Kenya counts a population of over 50 million.

During the past 15 years Kenya has been seeing a growing influx of people from the rural areas moving to the urban cities of which Nairobi is the largest with 3.4 million inhabitants. Mombasa, Kisumu, Eldoret and Nakuru are other key cities in the country.[9] About 75% the total Kenyan population is living in the rural areas, a number that is slowly decreasing as more people move to the urban areas in search for economic opportunities.[10]

The country has several ethnic groups of which the Kikuyu tribe, originally from the central part of Kenya, is the largest (6.6 million), followed by the Luhya (5.3 million), Kalenjin (4.9 million), Luo (4 million) and Kamba (3.9 million) and many other ethnicities.[11] Compared to other countries in the region, Kenya can be marked as *"tribalist"*. People have a tendency to relate faster and closer to people from their own

[5] WHO: Kenya Statistical Profile, data for the year 2013.
[6] Source: http://www.who.int/countries/ken/en/, d.d. 8 August 2016.
[7] Kenyan Demographic and Health Survey 2014, p. 12
[8] Source: http://www.africa.upenn.edu/NEH/kgeography.htm, d.d. 18 May 2016.
[9] Source: http://www.geocurrents.info/geonotes/intense-ethnic-divisions-in-the-2013-kenyan-election, d.d. 18 May 2016.
[10] Source: http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS, d.d. 17 March 2016 May
[11] Source: http://www.knbs.or.ke/index.php?option=com_content&view=article&id=151:ethnic-affiliation&catid=112&Itemid=638, d.d. 8 August 2016.

tribe. It is not uncommon for people who are from the same tribe to speak their own local languages amongst each other (not English or Kiswahili).

The life expectancy of Kenyans is averaged at 61 years, an age that has been slowly increasing but has been hampered due to the relatively high under 5 mortality and the deaths caused by HIV/Aids. Kenya has relatively young population as the median age is 19 years and the population of over 60 years only accounts for 4%. Compared to other African countries Kenya's life expectancy of 61 years is higher than average, leaving countries in the region like Uganda (59), Zambia (58), South Africa (60) and Nigeria (55) behind.[12] The main cause of death in Kenya is HIV/Aids (14.8%), followed by lower respiratory infections (12.3%).

The top 10 diseases that cause deaths in Kenya[13]			
		Deaths	*Percentage*
1	HIV/Aids	54 518	16.29 %
2	Influenza and Pneumonia	45 441	13.58 %
3	Diarrheal diseases	23 374	6.98 %
4	Protein-energy malnutrition	15 253	4.56 %
5	Birth asphyxia and birth trauma	14 853	4.44 %
6	Stroke	14 609	4.37 %
7	Low birth weight	13 528	4.04 %
8	Malaria	11 970	3.58 %
9	Tuberculosis	9 379	2.80 %
10	Ischemic Heart disease	9 163	2.74 %

Table 2: The top 10 diseases that cause deaths in Kenya

The above overview is in line with the main causes of death in other African countries. The top 5 causes of mortality in neighbouring country Uganda are all visible in the Kenyan list as well, however the percentages may differ slightly for Uganda: 1) HIV/Aids (17.3%), 2) Malaria (14.2%), 3) Lower respiratory infections (6.4%), 4) Meningitis (5.3%) and 5) Tuberculosis (4.5%).[14]

The under 5 mortality rate in Kenya is still high at 49 children per 1.000 (2015)[15] (compared to Tanzania, Ethiopia (59), Uganda (55), or Netherlands (4)). Nevertheless, it significantly improved since 2003 when the child mortality of under 5 stood at 115 per 1.000. The Kenyan fertility rate has been consistently decreasing. Whereas in 1978 a Kenyan woman gave birth to 7.8 children in her lifetime, in 2014 this number has decreased to 3.9 births per woman.[16]

1.2. Economy

Kenya's Gross Domestic Product (GDP) grew by 5.6% in 2015 compared to 5.3% growth in 2014.[17] Significantly higher than the average GDP growth in the world that stood in 2015 at 3.1%, but in the median compared to other countries in the Region: Tanzania 6.9% (p), Uganda 5.2% (p), Rwanda 6.5%

[12] Source: https://en.wikipedia.org/wiki/List_of_countries_by_life_expectancy, d.d 13 June 2016.
[13] Source: http://www.worldlifeexpectancy.com/country-health-profile/kenya, d.d. 14 June 2016.
[14] Source: http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_uganda.pdf,d.d. 18 May 2016.
[15] Source: http://data.worldbank.org/indicator/SH.DYN.MORT, d.d. 8 August 2016
[16] Kenyan Demographic and Health Survey 2014, p. 12
[17] Kenya Economic Survey 2016, p. 1

(p) and Burundi -7.2% (p).[18] The below table shows the growth projections of 2015, that existed in the year 2014 and compared to these projections the growth has been a bit lower than anticipated.

The main sectors that contributed to Kenya's economic growth are agriculture, infrastructure, financial services and ICT. The manufacturing and tourism sector declined in growth, the latter can be linked to the fear of terrorism that some tourists have when traveling to Kenya. Key macroeconomic indicators are remaining relatively stable, until recently where there has been a major variance in the inflation with the USD gaining against the KES to up to 20% in the last quarter of 2016.

Macro-economic development – Kenya				
	2013	2014	2015 (p)	2016 (p)
Real GDP Growth	5.7	5.3	6.5	6.3
Real GDP per Capita Growth	3.0	2.6	3.9	3.7
CPI Inflation	7.9	7	6.6 (actual)[19]	5.3
Budget Balance % GDP	-5.6	-8.0	-8.8	-8.3
Current Account % GDP	-5.9	-7.5	-7.9	-11.2

Table 3: Kenya – Macro-economic development overview[20]

Even though the manufacturing sector in Kenya slightly decreased, the increased competitiveness of the manufacturing sector will be a key driver of growth, exports and job creation. Kenya is emerging as one of Africa's key growth centres and is also poised to become one of the fastest growing economies in East Africa.[21]

The Kenyan middle class, and in particular the urban middle class, is on the rise and are having increasingly more means to demand for better quality healthcare. The African Development Bank (AfDB) defines the middle class as a group of people who spend (on per capita basis) USD 2 -20 daily.[22] AfDB further divides the African middle class into three groups: floating class (just crossing pass the poverty line) (able to consume USD 2-4), lower-class (USD 4-10), and upper class (USD 10-20). According to this definition, the Kenyan middle class constitutes 44.9% of the total population and are boosting the national economy through increased consumption.[23]

Kenya shows a high level of inequality amongst its population. Kenyans living in different regions have a completely different lifestyle and access to services. For example: Individuals in Nairobi have 15.2 times more access to secondary education than individuals living in Turkana and children in Turkana are 7 times less likely to have access to secondary education than an average Kenyan.[24] Another example: Urban areas have a 10 times higher electricity coverage (51%) than rural areas (5%).

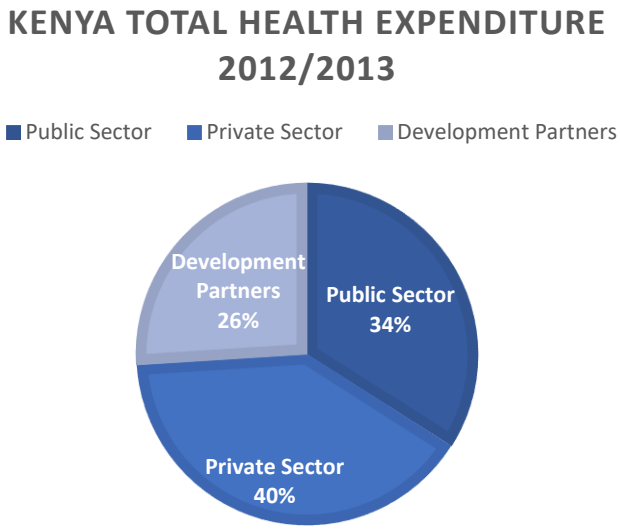
In 2015, the total employment (besides small-scale agriculture and pastoralist activities) increased by 5.9% to about 15.2 million persons. The economy generated a total of 8,416,000 jobs of which 1,280,000 are in the (taxpaying) formal sector while the rest is in the informal sector. Overall, the total earnings

[18] Kenya Economic Survey 2016, p. 14.
[19] Kenya Economic Survey 2016, p. 1
[20] Odero, Walter O., Wilmot A. Reeves and Nicholas Kipyego, Kenya *2015 – African Economic Outlook*, AfDB, OECD and UNDP, 2015.
[21] http://www.worldbank.org/en/country/kenya/overview, d.d. 17 March 2016.
[22] African Developent Bank, The Middle of the Pyramid: Dynamics of the Middle Class (2011)
[23] The Rising Middle Class of Africa (2013), Grail Research, p. 5
[24] Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID),2013, *Exploring Kenya's Inequality, p. vi.*

increased from KES 1,311.1 billion (approx. EUR 11.2 billion) in 2014 to KES 1,497.3 billion (approx. USD 15 billion) in 2015, representing a rise of 14.2%. [25]

1.3. Health Expenditure

In 2012/13, the public sector accounted for 34% of the Total Health Expenditure (THE); the private sector for 40% and development partners accounted for 26% which has come down from 35% in 2009/10. In the latest national Ministry of Health (MOH) budget development partners accounted for 57.1% of the total health budget in FY 2014/15, compared with 59.8% in FY 2013/14.



Graph 1: Kenya Total Health Expenditure 2012/2013

The THE has increased in recent years e.g. from KES 234 billion (USD 2,743 million) in 2012/13, up from KES 163 billion (USD 2,155 million) in 2009/10.[26] However, about one third of the THE has been from OOP payments whereby individuals and households directly paid for their health services or products.[27] In Kenya "*public health expenditure has stagnated and remains low even by regional standards. Public expenditure per capita has stagnated in the range of USD 12, - and accounts for about a quarter of total spending on health which averages to 1.2% of GDP. The sector spending accounts for 6% of total government expenditure and is one of the lowest shares in the EAC region*."[28] The 6% of total public healthcare expenditure is far below the 15% as agreed by the Abuja Declaration.

The Government of Kenya (GOK) has taken measures to increase the share of public health expenditure in primary healthcare and introduced the Health Sector Services Fund (HSSF) to increase the amount of funding for primary healthcare and to ensure a timely flow of resources to the facilities. However, the level 4 and 5 hospitals remain the main drivers of curative expenditure in the sector, due to (costly) specialist services and higher patient flows (about 33% of the total public health expenditure).[29]

[25] Kenya Economic Survey 2016, p. 2
[26] NHA, p. xix.
[27] PER Health Report, Vol122014, p. ii.
[28] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014.
[29] *KENYA PUBLIC EXPENDITURE REVIEW,* Laying The Foundation For A Robust Health Care System In Kenya Vol I, December 2014.

Public health services are financed via budget funding, health insurance (mainly NHIF) and user fees, whereby the patients pay out of pocket. The current GOK abolished in 2013 the user fees in the public sector at dispensaries and health centre level for specific groups: Children under 5 years of age, pregnant women, and Orphans and Vulnerable Children (OVC). Furthermore the government has provided funding to compensate the facilities for the revenue loss from the limited user fee income. This budget expenditure has increased from KES 700 million (about USD 6.9 million) in 2013/2014 to approximately KES. 1.7 billion (about USD 166 million) in the period 2014/2015 – 2016/2017.[30]

The health sector received about 40 percent of the public funding from county level in the 2012/2013 budget (about KES 54b/ USD 527m), which means that 40% of the national health budget was devolved at that time.

Even though the national healthcare budget increased in the year 2013/2014 (and about two thirds of the public health sector budget was devolved to the county), available data suggests that the total public expenditure on health declined that same year, which means that not all the money budgeted for health was actually spent on health. Annual projections from 2013 onwards, based on a 6 month expenditure cycle suggest that the total county expenditure on health can reach KES 42 billion (USD 410 million - including salaries paid to health workers in the county from a national budget) which falls KES 12b (USD 117 million) short of the budget marked for the devolved health sector in the 2012/2013 budget.[31] [32]

1.4. Disease Pattern

Kenya's burden of disease has historically mostly been related to communicable diseases as HIV/Aids, respiratory infections, malaria and Tuberculosis (TB). However, research is showing a large and fast increase in the prevalence of non-communicable diseases such as cancers and cardiovascular diseases. This is mostly attributed to the increasing (urban) middle class who are eating more unhealthy fast foods and exercising less. Injuries are the third major contributor to the burden of disease, mainly caused by road accidents along the major Kenyan high ways.[33]

	2000	2012
Communicable Diseases	82	72
Non-Communicable Disease	11	18
Injuries	7	10

Table 4: Distribution of years of life lost by major cause group (%)

Over the years there has been a significant progress in improving several health outcomes and utilization of health services in Kenya. The child mortality rate in the country significantly dropped (by nearly a third in the period 2003-2012) and over the past decade the burden of major communicable diseases has been effectively reduced. Furthermore, the number of children that were fully immunized increased by 10% (from 57% in 2003 to 68% in 2008). [34] The same World Bank data suggests that the prevalence

[30] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya Vol I, December 2014, p. vi
[31] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya Vol I, December 2014, p. vi
[32] For a basic overview of the MOH budget allocation see: http://budget.opendata.go.ke/#!/year/2016/operating/0/vote/Min.+Health/0/program
[33] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014, p.2
[34] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014, p.2

of HIV among adults declined from 7.2% in 2007 to 5.7% in 2012. However, a recent study by the Global Burden of Disease collaborative network published in The Lancet HIV shows that the number of new HIV infections in Kenya is rising faster than in any other country in sub-Saharan Africa.[35] Between 2005 and 2015, the number of new HIV cases grew by an average of 7 per cent per year, one of the highest increases in the world.

Communicable diseases, maternal and perinatal conditions continue to be leading causes of disease in Kenya. Nevertheless, hospital data suggests that Non-Communicable Diseases (NCDs) account for 50-70% of hospital admissions and are responsible for up to 50% of inpatient mortality rates.[36] It is projected that by 2027, NCDs will be the main disease burden for the country.

[35] Source: http://www.nation.co.ke/news/Kenya-sees-dramatic-rise-in-HIV-infections--study-shows/1056-3302288-4sn8lnz/index.html

[36] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014, p.2

2. Kenyan Healthcare System

2.1. Historical Background

Kenya, a former British colony, gained independence in 1963. One of the first proposals of the new Kenyan Government was "free healthcare to all Kenyans" with the belief that a healthy nation would create greater economic development. By 1965 the Government of Kenya (GOK) finalized the "Free Healthcare for All" concept and abolished user fees for people seeking care in locally managed public clinics. In 1970 the Ministry of Health (MOH) nationalized the health system and extended the "Free Healthcare for All" policy to all public health facilities. However, in 1973, the Kenyan economy stagnated and it became financially impossible to continue operating public facilities without the charge of user fees. Therefore, in 1989, the MOH had to reinstate user fees. In 1992, a reform process took place which led to the creation of District Health Management Boards to facilitate cost-sharing and ensure the availability of funds for health services in peripheral areas.[37] Due to continuing financial restraints more intensive restructuring of the health systems were implemented by the mid-1990s.

In 1994, GOK published the Kenya Health Policy Framework Paper (KHPF) which envisions a system, from 2010 onwards, that provides: "quality healthcare that is acceptable, affordable and accessible to all". The policy, with decentralization (devolvement) as a guiding strategy, has been implemented via two 5-year plans: The National Health Sector Strategic Plan (NHSSP – from 1999-2004) and the National Health Sector Strategic Plan II (NHSSP II – from 2005-2010). Under the framework that the NHSSPs set out the public health system is set organized in hierarchical pyramid. Village dispensaries, which are the highest in number and lowest level of care – comprise the lowest level of the pyramid. District health centres and provincial hospitals are fewer and higher on the pyramid. At the top of the pyramid one can find the Kenyatta National Hospital (KNH), the largest (public) hospital.

In 2010, the revised Kenya Constitution devolved the responsibility of public health service delivery for primary and secondary health services to the 47 counties. The national MOH provides policy support and technical guidance to priority national programs and stays in charge of the national referral hospitals and remains responsible for HR for health (university teaching hospitals, public universities and medical schools). In 2013, after the elections, the new Constitution came into force and the changes in roles and responsibilities from a national to a county level became a reality. The goal of devolution in health is to enhance equity in resource allocation, thereby improving service delivery for the majority of Kenyans, especially those residing in rural areas.[38]

In principle, the devolved system is supposed to bring more ownership and decision power to the local level. However, the devolution has brought about budget cuts and the fact that public administrators now have the responsibility to manage their public hospitals in a business-oriented way has led to quite some challenges. It differs per county, how good the public health facilities are managed. It is expected that in due time the privatization of the management of public hospitals will be introduced to fill the gaps in some counties. On the other hand, some county leaders are taking their new roles seriously and investing quite a lot in infrastructure and equipment.

[37] http://smartglobalhealth.org/parges/kenya-mission/kenya-health, d.d. 21 March 2016
[38] NHA, p.3

2.2. Government Policy and Implementation Plans for Healthcare

The MOH is responsible for guiding and regulating the health sector in Kenya. Besides this, the MOH is also in charge of the overall (national-level) management of public health services in the country. The MOH is headed by the Cabinet Secretary (CS – formerly known as Minister) and is appointed by the President. Directly under the CS are the Principal Secretary (PS) and Director of Medical Services (DMS). The CS and PS are appointed by the President and the position of DMS is fulfilled via a public solicitation process. The PS is the final-responsible for the Internal Audit of the MOH, Semi-Autonomous Government Agencies (SAGAs) and Parastatals. Furthermore, the PS leads the Department of Administrative Services (which includes: General Administration, ICT, HR, etc.). The DMS is in charge of the provision of all medical services which means he/she oversees the Regulatory Bodies, and all the departments that ensure that health services in Kenya are provided (e.g. Standards & Quality, Preventive and Promotive Health, Curative and Rehabilitation Health Services, Policy, Planning and Health Financing, Coordination and Inter-government). For an organogram of the Ministry of Health's organisational structure see: Annex 1.

The GOK has developed the Kenya Health Sector Strategic and Investment Plan 2013-2017(KHSSP) in which its sets out it strategic directions and lines out its key focus points. In regard to the medical infrastructure, the KHSSP includes all investments relating to:

- Physical Infrastructure
- Medical Equipment
- Communication and ICT
- Transport

Annex 3 shows the current status of medical infrastructure in Kenya.

Over half of the Kenyan healthcare facilities have old infrastructure which results in the fact that many of these facilities do not conform to the current norms and standards with respect to expected staffing, infrastructure and equipment. Even though the KHSSP includes plans to expand the medical infrastructure, significant challenges are present especially in relation to equity in distribution. The MOH is keen to invest in medical infrastructure projects that are geared toward addressing and achieving equitable geographical access to healthcare. The KHSSP reckons that availability and functionality of diagnostic medical equipment is critical in treatment and that most medical equipment in public health facilities is over 20 years old and are therefore breaking down often. Furthermore, the facilities do not have modern equipment and it is therefore that the MOH has made investments in modern medical (diagnostic) equipment a key priority for the coming years.

The Kenyan Health Policy 2014-2030 sets out the direction of the country to ensure significant improvement in the overall health status in Kenya. The policy sets out the framework direction for health systems strengthening in the country: Orientations, Principles, Objectives and Goals. Figure 2 provides a visual.[39]

[39] Ministry of Health, Kenya Health Policy 2014-2030, p. 26

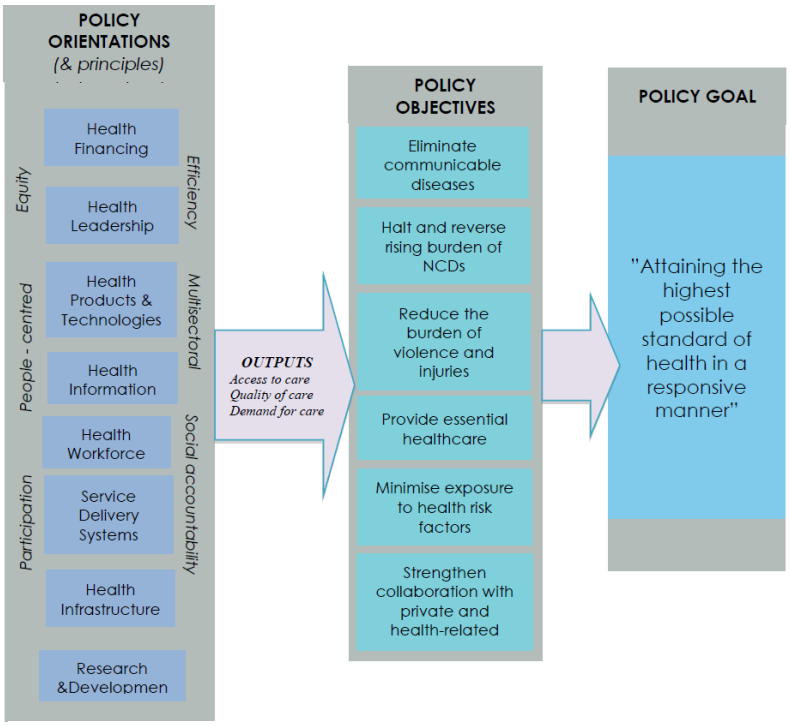


Figure 2: Kenyan Health Policy Framework 2014-2030

One large national public private partnership (PPP) that is currently ongoing in Kenya is the so-called Managed Equipment Services (MES) project (see text box below).

Managed Equipment Services (MES) project: Philips one of the main suppliers

In June 2013, the Senate agreed that the Government is to establish a level 5 and level 4 hospital in each of the 47 counties before the end of the government term in 2017. Before the devolutions Kenya had 6 levels of healthcare provision that changes in a system of 5 levels. The previous level 5 hospitals in the county have become County referral hospitals and the previous level 4 hospitals are now known as sub-County referral hospitals. In order for these developments to take place the medical equipment facilities needed to be upgraded, hence the MES project which was initiated by the National and County governments. The MES project has been designed to cover 6 areas of care: dialysis, emergency, maternal and child health, basic and advanced surgery, critical care and imaging services.

To address these areas, the equipment were placed under seven Lots or categories:

- Theatre

- Sterilization

- Laboratory

- Dialysis (renal)

- Intensive Care Unit

- Radiology which covers imaging (X-ray)

All the selected County hospitals and two national referral hospitals will receive theatre, sterilization and radiology equipment. Further, each County referral hospital and the two

national referral hospitals will get dialysis machines. Eleven hospitals that were formerly Level 5 will get ICU equipment.

So far, 10 hospitals have been fully equipped under MES1, 31 hospitals out of a target of 96 have also received theatre equipment while 54 have sterilization equipment and theatre instruments, 14 hospitals out of the targeted 49 have acquired dialysis equipment, 2 out of the 11 have received ICU equipment, and 53 out of 98 hospitals have required digital X-ray equipment (radiology) like ultrasound and mammography unites.

The main medical equipment suppliers under current contracts are Philips, General Electric and Toshiba. Through the MES project each of the 47 counties will acquire different sets of medical equipment in order to bring the services to all Kenyans and lift the financial burden. In the near future a county referral hospital and one sub-county hospital will be upgrade to a level 5 and level 4. In addition, several level 5 hospitals (Kenyatta National Hospital, Moi Teaching Hospital, National Spinal Injury Hospital and the Mathari Teaching and Referral Hospital) will get equipment upgrades.

County system

In 2013, Kenya implemented the New Constitution which was popularly passed at a National referendum and later approved by the Parliament in 2010. One of the main pillars of the constitution is the process of devolution whereby part of the public decision-making processes and a large part of implementation will fall under regional leadership whereby the country has been divided in 47 sub-regions also referred to as counties.[40]

The county government has the following mandate:

- County legislation
- Executive functions
- Functions transferred from the national government
- Functions agreed upon with other counties
- Establishment and staffing of public services

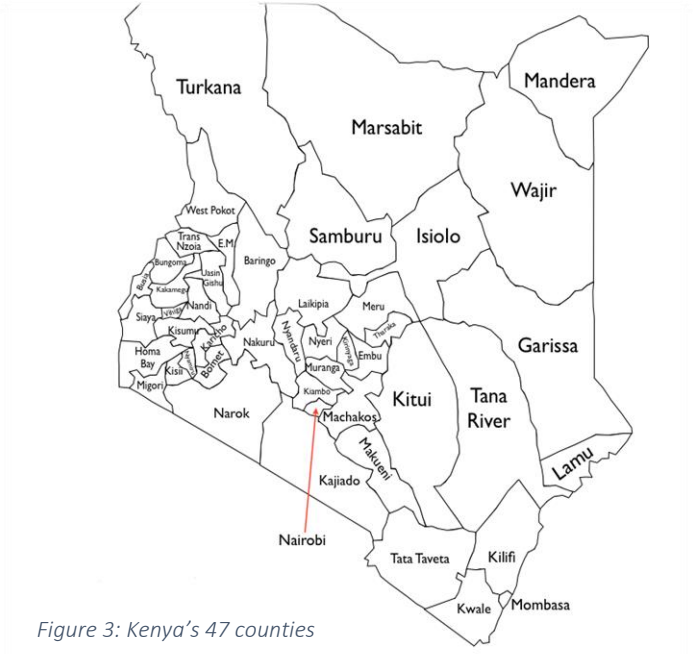


Figure 3: Kenya's 47 counties

[40] For county specific data please visit: https://www.opendata.go.ke/facet/counties

"The county level and national level of government are distinct and interdependent and will conduct business on the basis of "consultation and cooperation." In the context of doing business with counties, this means that the majority of the networking and work will be done at county level. In some larger projects or specialized PPPs it might be that consultation from the national level of the government is sought.

The National Government will periodically release funds to the county government. The amount of funding per county depends on several factors: Population, Poverty Index, Land area, Basic Equal Share and Fiscal responsibility. The release of funds from the national government will depend on whether a County has prepared an integrated development plan and is done by the Commission on Revenue Allocation who sets the payment formula. Integrated development planning is defined as *a process through which efforts at national and devolved levels of government and other relevant public institutions are coordinated at local level, and through which economic, social, environmental, legal and spatial aspects of development are brought together to produce a plan that meet the needs and targets set for the benefit of local communities*.

The County Integrated Development Plans of each county are accessible via the following website: http://devolutionhub.or.ke/resources/47-counties. This website also provides basic information on each county such as fact sheets, legislations and county reports.

The Kenya Health Policy 2012-2030 proposes that each county will establish a *health department* which role will be to create and provide an enabling institutional and management structure whose responsibility is to coordinate and manage the delivery of healthcare mandates and services at county level. The county health department sits in the county government management structure. Furthermore, the policy sets out the formation of *county health management teams* that will provide technical and professional management structures in the county that will coordinate the health service delivery through the health facilities present in each county.

The table 5 sets out what responsibilities in the Kenyan health sector are devolved to the county and which remain under the responsibility of the national government (MOH).

National ministry responsible for health	County department responsible for health
Health Policy	County health facilities and pharmacies
Financing	Ambulance services
National referral hospitals	Licensing and control of agencies that sell food to the public
Quality assurance and standards	Disease surveillance and response
Health information, communication and technology	Veterinary services (excluding regulation of veterinary professionals)
National public health laboratories	Cemeteries, funeral homes, crematoria, refuse dumps, solid waste disposal
Public-private partnerships	Control of drugs abuse and pornography
Monitoring and Evaluation	Disaster management
Planning and budgeting for national health services	Public health and sanitation
Services provided by Kenya Medical Supplies Agency (KEMSA), NHIF, KMTC and KEMRI	
Ports, borders and trans-boundary areas	
Major disease control (Malaria, TB, Leprosy)	

Table 5: Responsibilities of the national and county government in health.[41]

[41] Constitution of Kenya, Fourth Schedule

Health resources are not earmarked in the transfer from the national level to the county level. An in-depth analysis of the National and County Health Budget 2014/15 can be found via:

http://www.healthpolicyproject.com/pubs/532_FINALNationalandCountyHealthBudgetAnlysis.pdf.

County-level snapshots of selected health indicators providing county-specific health data and comparison to national figures can be found here:

http://www.healthpolicyproject.com/index.cfm?id=kenyaCHFS

Analysis of county level health budget allocations[42]

"The counties' health sector budgets increased from 13 percent of total counties' budget in FY 2013/14 to 22 percent in FY 2014/15. However, substantial variations between counties are also noted. In FY 2013/14, 22 counties allocated at least 15 percent of their budget to health, compared with 38 counties in FY 2014/15. The split between recurrent and development health budgets remained constant at 75 percent in FY 2014/15 and 25 percent in FY 2013/14.

In FY 2014/15, 69 percent of the recurrent health budget was allocated to personnel emoluments, while 13 percent went to finance operations and maintenance. Medical drugs received only 8 percent of the recurrent budget. Investment in the construction of facilities was the largest expenditure category in the development budget in FY 2013/14, with an allocation of 51 percent of the total county health budget. During FY 2014/15, construction of facilities was allocated 51 percent of the total county health budget. A further 13 percent was allocated to vehicles, including ambulances. Medical equipment had an allocation of 14 percent, while rehabilitation was allocated 22 percent. It is worth noting that a few counties did not show a disaggregated development budget which made it difficult to determine what projects would be implemented.

Overall, the county health budget per person was KShs 1,567 (US$18.2) in FY 2014/15 compared to KShs 962 (US$11) in FY 2013/14. However, there was a wide variation in per capita health budget allocations between counties in FY 2014/15, ranging from KShs 4,102 (US$47.7 per capita) in Lamu County to KShs 384 (US$4.5) per capita in Laikipia."

Private Sector Health Partnership Kenya

In 2015, the UNFPA and Kenya Healthcare Federation, together with 5 companies (Philips, MSD, GSK, Safaricom and Huawei) founded the Private Sector Health Partnership Kenya. This is a private sector driven partnership that promotes PPPs and investments in the 6 counties with the highest maternal mortality: Mandera, Marsabit, Migori, Isiolo, Lamu and Wajir. The PSHP Kenya envisions collective action with private sector partners and collaboration with the public sector to decrease trade barriers and increase incentives for investments as key drivers to steer up investments in health in the areas that have often been neglected. The partnership is open to private sector partners that have an demonstrable interest in investments to reduce maternal health in the 6 counties.[43]

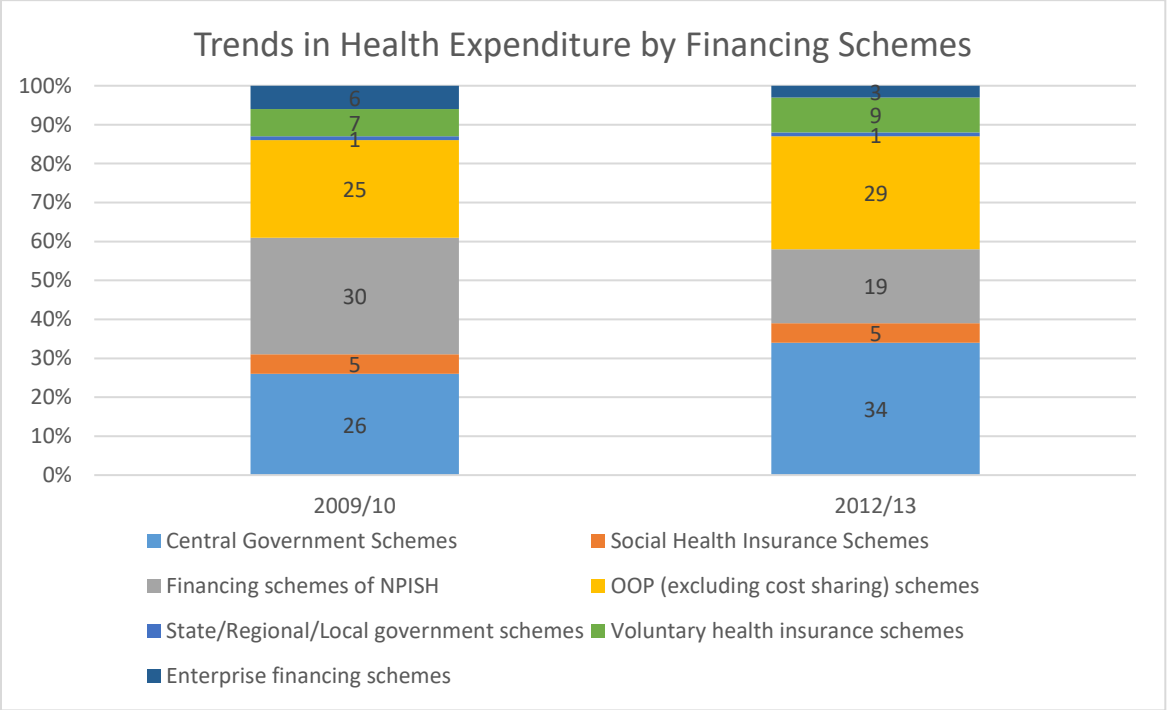
[42] Ministry of Health, 2014/2015 National and County Health Budget Analysis Report

[43] For more information visit: www.pshpkenya.org

2.3. Health Financing

Financing schemes are the main types of financing arrangements through which people receive healthcare. These schemes help in defining how healthcare resources are managed and organised, and to what extent resources are pooled.

In 2012/13, 34 percent of Current Health Expenditure (CHE), which only includes the public sector, was mobilised through central government schemes, up from 26 percent in 2009/10. Household OOP payment (excluding cost sharing) and non-profit institutions serving households (NPISH) financing schemes mobilised 29 percent and 19 percent of CHE funds, respectively, in 2012/13. Notably, CHE funds mobilised through non-profit institutions serving households (NPISH) financing schemes declined by 37 percent in 2012/13, compared with 2009/10 estimates. Graph 2 shows the trends in CHE by financing schemes.[44]



Graph 2: Trends in Health Expenditure by Financing Schemes

The Kenyan healthcare financing system is a mixed system with the following main components:

1. **General tax financing:** This consists of certain "free" healthcare services in the public health facilities, which has later been modified by the introduction of user fees. The GOK currently offers "free" maternity services at public facilities.
2. **National Hospital Insurance Fund (NHIF):** Established in 1966, the fund was set up to provide financing for public and private facilities that were approved by the fund. The NHIF is mandatory for formal sector workers and has about 2 million members.[45] Currently, NHIF covers 2.9 million Kenyans in the formal sector and an additional 4 million in the informal sector via the Health Insurance Subsidy Program for the Poor (HISP).[46] A significant increase compared to 2012/13 data.

[44] NHA 2012/13, p. 15
[45] Deloitte, Market Assessment of Private Prepaid Health Schemes, p17
[46] Source: http://www.health.go.ke/?p=1658, d.d. 8 August 2016/

The NHIF used to provide standard basic inpatient services only and has recently expanded to offering outpatient packages as well. The Fund does not have real incentives to look into innovative solutions on prevention of diseases as this does not impact their current cost structure.

3. **Private health Insurance:** Even though the Kenyan private healthcare insurance sector has grown over the last twenty years, the sector is still quite small. In 2010 the number of people with a private insurance cover was about 600,000.[47] A recent visit we had with a private health insurance company mentioned the number of privately insured was up to 1.5 million. The penetration of the private health insurance in Kenya is about 2% of the total population and can be divided into two parts: 1) Insurance companies (underwriters) and 2) Medical Insurance Providers (MIPs – the local equivalent of managed care organizations). The Insurance companies and MIPs are regulated by the Insurance Regulatory (IRA). There are about 25 private insurance companies with activities in healthcare.
4. **Employer Self-Funded Schemes:** Health schemes whereby the employer offers health benefits as incentives to their workers and dependants via a self-insured in-house medical scheme. These funds can be managed by the company themselves or via a third party administrator (TPA). There is no specific regulation as such for in-house schemes.
5. **Community based health financing (CBHF) schemes:** These type of health financing schemes have increased over time and meet the needs of the lower income population who traditionally have been left out of the private insurance schemes and NHIF. There is no specific regulation for CBHF and most are registered by the Ministry of Public Service, Gender and Youth Affairs.
6. **OOP health spending:** The number of patients that pay their health services OOP in Kenya is very high (one third of the total health expenditure in 2012[48]). The OOP health spend is a big barrier for Kenyans accessing healthcare services as it drives the poorer households easily into poverty. The costs of treatment continue to limit the access of care especially by the poor. The MOH estimates that 16% of the sick do not seek care due to financial constrains while 38% of them must sell their assets or borrow in order to finance their medical bills. In Kenya, one has to pay directly for health services at the point of consumption, because of this 4.1% of the household face catastrophic expenditures and this pushed 1.5% of the households below the poverty line.[49]
7. **Development partners & Non-Governmental Organisations (NGOs**): Various development partners and NGOs have traditionally contributed significantly to healthcare financing and provision. In the last decade, the proportion of healthcare expenditure contribution by development partners in healthcare financing has more than doubled raising concerns on the sustainability of the health system. [50]

Remittances from family members and/or friends.

A large part of payments for healthcare come from remittances from richer family members living in the cities or diaspora to less affluent family members often living in the slums or rural areas. For example, research in Kenya based on household surveys demonstrates that about two thirds of all remittances (domestic and international) are spent on food,

[47] Deloitte, Market Assessment of Private Prepaid Health Schemes, p17
[48] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014
[49] Kenya Health Systems Assessment (2010), p.18
[50] Deloitte, Market Assessment of Private Prepaid Health Schemes, p17

education and health[51] and that one third of hospital bills is paid with domestic remittances[52].

Crowding in from financial institutions is also stimulated, as almost real time data collection increases transparency and control, and hence reduces risk, making it more attractive to invest in health.

The estimated population that are covered by insurance in 2010 was estimated to be about 7.77 million (roughly 20% of the population. This 20% can be divided as follows: NHIF 6.6 million (85%), private health schemes 700,000 (9%) and Community Based Health Financing 470,000 (6%). Most of the people that are covered are in the formal sector. [53]

Based upon our own findings during this market study the current status (2016) of insured population can be divided as follows (2016)

- NHIF: total 6.9 million (2.9 million formally employed and 4 million informal sector)
- Private sector insurance: 1.5 million
- CBHI: 470,550 members[54]

Kenyan health insurance providers usually offer 2 types of health covers that can be taken up together or separately. The first one is an *Inpatient Cover*, which covers hospitalization of a patient and the expenses linked to the hospitalization. The second cover option is an *Outpatient Cover* which includes medical costs which do not require a hospitalization of the patient. There are different top-up packages that a client can choose to make the health insurance cover more comprehensive. Examples of top up packages are: maternity (not for NHIF, as it is standard included), dental and optometry. Health insurances in Kenya offer coverage up to a certain pre-set amount, depending on the type and cost of the insurance package.

Health Insurance Coverage in Kenya: still a lot to gain

"Comparing Kenya (~20%) with countries such as Rwanda (91%) and Ghana (60%) points to the fact that the country has potential to increase coverage significantly. Some of the enabling factors for Rwanda and Ghana include a strong pre-existing community-based healthcare financing system, strong solidarity concept, legal, regulatory and institutional reforms to mandate cover, government subsidies and donor support. Most stakeholders estimate that a further 25% of the population (mainly in the informal sector) can afford some form of prepaid scheme and this presents a low hanging fruit for increasing coverage. The biggest challenge is how to increase coverage to the 46% poor and among them 20% indigent. In addition to cross subsidies and solidarity from social health insurance funds, the government and development partners will be required to provide resources to cover this group."[55]

2.4. Structure of the Kenyan Healthcare System

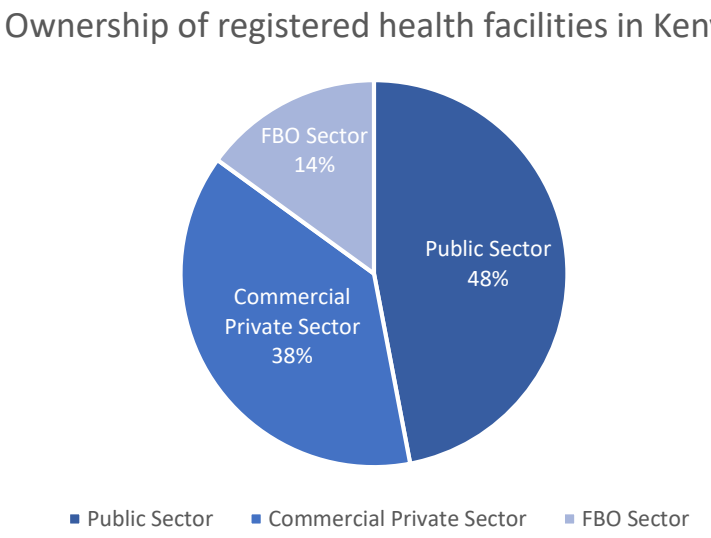
The Kenyan healthcare sector can be divided in 3 sub-sectors:

[51] Findings from Household Surveys on Migration and Remittances, Sonia Plaza (The World Bank), Global Remittances Working Group, April, 2012, p.17.
[52] "In the Diaries study, 35 percent of hospital bills were paid with remittances through M-PESA". Financial Services Assessment, Cash In, Cash Out Kenya, p. 66.
[53] Market Assessment of Private Prepaid Schemes in Kenya (2011), p. 21
[54] Kipaseyia, John Saitoi, Factors influencing membership uptake of National Hospital Insurance Fund among the poor: a pastoralist' perspective (2016), p.2
[55] Market Assessment of Private Prepaid Schemes in Kenya (2011), p.70

1. The public sector, which include all government health facilities (hospitals, clinics and dispensaries), medical schools and the public pharmaceutical supply chain called KEMSA.
2. The non-commercial private sector. Which include the Faith Based Organization (FBO) and Non-Governmental Organisation (NGO), which include mission health facilities (hospitals, clinics and dispensaries), medical schools and MEDS; the Faith Based pharmaceutical supply agency.
3. The private commercial ("for-profit") sector which include healthcare facilities, medical distributors/suppliers, pharmaceutical/medical manufacturers, health financing (f.e. health insurance), ICT in health, health management advisory and training institutions.

2.4.1. Access to Healthcare

According to the Kenyan Master Facility List (MFL), which includes all officially registered health facilities in the country, there are a total of 9,696 health facilities in the country. About 4,616 of these facilities are owned by the public sector, 3,696 fall under ownership of the commercial private sector and 1,384 is owned by FBOs, NGOs or Community Based Organizations (CBOs).[56]



Graph 3: Ownership of registered health facilities in Kenya

2.4.2. Rural versus Urban Infrastructure

The health sector in Kenya is most developed and centred on the urban areas, especially the private sector investments as they would not yield sufficient return in the low populated areas.[57] The rural areas are behind in terms of healthcare development and it is the goal of the government to change this via the devolution system that has revolved public decision-making powers to the 47 counties.

Approximately 75% of Kenyans live in rural areas, yet the majority of the health facilities are in the urban areas. The people from the rural areas often have to travel long distances, often on foot, to receive healthcare. According to the World Bank, the index of access to health services (measuring the share of new-borns delivered at a health facility) in Kenya "*speaks volumes to this disparity. For example, over eight in ten children born in Kirinyaga county, which is located in the central part of the country, are*

[56] http://kmhfl.health.go.ke/: Master Facility List visited on 8th August 2016.
[57] Nairobi, Mombasa, Kisumu, Eldoret, Nairobi, Thika ,Nyeri, Machakos.

delivered in a health facility. In Wajir, which is located in one of the most remote and marginalised regions of the country, one child in twenty is born in a health facility."[58] In Wajir county only 12% of the deliveries are assisted by a skilled birth attendant, compared to 97% in Nyeri county. Also, in Wajir only 47% of the children were fully immunized compared to 93% in Nyeri.[59]

The geographical disparities in healthcare access in Kenya are very high. For a map of the spread of healthcare facilities in Kenya see Annex 4. In general, the large cities in Kenya have a higher presence of private healthcare facilities whereas in the more remote rural areas, with a low population, often the public health facilities are the only healthcare providers in the region.

2.4.3. Health Workforce

The World Health Organization (WHO) recommends at least 23 doctors, nurses and midwives per 10,000 people. Kenya has one doctor, 12 nurses and midwives per 10,000 people.[60] The health worker shortage but also inefficiency of health workers are big challenges for the Kenyan health eco system at large. The largest shortfall of health workers is in the rural areas whereas the urban areas are often not facing health worker shortages but have health workers that lack a certain level of capacity and efficiency.

The majority of the Kenyan health workforce work in the private sector, almost 75% of the medical doctors and 66% of the nurses and clinical officers. The table 6 provides a more detailed breakout of the health worker numbers in the private and public sector. One should note that since the 1980s/1990s the regulatory board allows health workers to work in both the public and private sector at the same time. This means that a doctor can work in the morning hours at a public health facility and in the afternoon work in or run his/her own private practice.

Cadre	Total Registered (2007)	Public Sector (2008)	Private sector (2008)	Private Sector (% of total)
Doctors	6,271	1,605	4,666	74
Dentists	631	205	426	68
Pharmacists	2,775	382	2,393	86
Pharmaceutical Technologist	1,680	227	1,453	86
Nursing officers	12,198	3,013	9,185	75
Enrolled Nurses	31,971	11,679	20,238	63
Clinical Officers	5,797	2,202	3,595	62

Table 6: Health worker breakout per sector[61]

The Kenyan healthcare system, and especially the public sector has a large shortage of qualified health workers. Due to financial restrains the government is not able to provide attractive salaries and maintain its health workers on board. This results in an overstressed HR system and causes regular strikes in public health facilities. As mentioned before, it is not uncommon to find a medical doctor working in the public sector in the morning, and in the afternoon he/she is working at a private practice. This practice is commonly referred to as 'moonlighting'.

[58] Devolution of Health Services in Kenya (KPMG), 2013, p. 7.
[59] World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014, p. 1
[60] Kenya Institute for Public Policy Research and Analysis (KIPPRA), 2012. Kenya Economic Report 2012
[61] World Bank Working Paper No 193, Private Health Sector Assessment in Kenya, p.10

The private sector faces less issues of strike and overstressed staff workers as they are able to provide a more attractive salary and attain their health workers. However, the number of medical specialists in the country is very low. This gives the few specialized doctors (and even General Practitioners) that are practicing in Kenya a high bargaining power. They usually, especially in the private sector, receive high salaries which drives up the costs of healthcare. The reason why the private sector is paying these salaries is the fear of expertise loss of their facility which creates a system where doctors are often working for the highest bidder.

2.4.4. Public Healthcare Services

The National Government is responsible for the healthcare provision in national referral hospitals. These are the highest level of hospitals in the public health domain and provide the most extensive type of services from within the public health sector. Currently Kenya has 4 of these type of hospitals: Kenyatta National Hospital in Nairobi, Moi Teaching and Referral Hospital in Eldoret, the National Spinal Injury Hospital in Nairobi and the Mathari Teaching and Referral Hospital in Nairobi.

The other types of health services that the Kenyan public sector offers are: County Referral Sercies, Primary Care Services and Community Health Services. All these fall under the county government.

Type of service level	Description	Services offered
National Referral services (level 5, former: level 6 hospital)	Intended to serve all Kenyans and act as a referral centre for lower-level hospitals. They offer a full range of specialized services: sophisticated diagnostics, therapeutic and rehabilitative services.	Surgical services, internal medicine, and specialty services such as emergency obstetric care (EmOC) and anesthesiology
County Referral Services(former Level 4/5 and District Hospitals/Sub County Referral Hospitals)	The intermediary between national referral hospitals and district level hospitals. They oversee the implementation of health policy at district level and coordinate district health activities. These type of hospitals provide some form of specialized care.	Surgical services, internal medicine, and specialty services such as emergency EmOC and anesthesiology but less extensive as the National Referral Hospitals.
Primary Care Services (District and sub-district hospitals / Sub County Referral Hospitals	These are primary hospitals and serve as the main referral centres for health centres and offer different services as outpatient care, maternity and inpatient services, emergency surgery, blood transfusion, laboratory and consultative services in relation to community based programs.	Antenatal care (ANC) and routine birthing services, majority of hospitals had formal immunization programs (98%, with only one tertiary hospital reporting that it did not host an immunization program), HIV/ AIDS care (96%), paediatric services (93%), and EmOC (78%).

		Over 80% of all facilities provide HIV/AIDS services[62]
Community Health Services	All community-based demand creation activities, that is, the identification of cases that need to be managed at higher levels of care, as defined by the health sector.	A range of preventive and curative services with a focus on primary care services.

Table 7: Types of health facilities in the Kenyan public sector[63]

Annex 5 sets out the different types of services versus the availability of these services per type of healthcare provider.

2.4.5. Private Healthcare Services

Since the last 20 years the private health sector in Kenya has shown significant growth and Kenya's private health sector is one of the most developed and dynamic in Sub Saharan Africa. Potential factors contributing to this growth include: the lack of quality public health services, the introduction of user fees in the public facilities and health sector reforms that eased the licensing and regulation of private healthcare providers and allowed public sector staff to work in the private sector as well.[64]

Approximately 47% of the poorest quintile of Kenyans will go to the private (commercial) sector for their healthcare needs and two-thirds of the money spent in the private sector is on health services rendered in hospitals. The size of the private healthcare market in Kenya was estimated by the 2005/06 NHA to be KES 20.7b (about USD 260 million), a conservative estimation due to the exclusion of health policy expenses and health education (which is key given the recent growth of private medical schools).

Kenyan private health sector: Key facts[65]

- *The size of the private healthcare market is KES 20.7b (about USD 260 million)*
- *Two-thirds of the money spent in the private sector is on health services rendered in hospitals.*
- *The private sector owns and manages almost two-thirds of all Kenya's health facilities.*
- *The private sector is the largest employer of healthcare professionals in Kenya.*

The Kenyan private sector consists of commercial (for-profit) players and FBOs/NGOs or not-for profit.

The private health sector consists of different types of healthcare providers:

1. Informal untrained providers (traditional healers, unregistered drug shops, etc.)
2. Formal providers in clinics (doctors, nurses, midwives)

[62] Health Service Provision in Global UNIDO Project: Strengthening the local production of essential generic drugs in the least developed and developing countries Kenya, Assessing Facility Capacity, Costs of Care, and Patient Perspectives, Institute for Health and Evaluation, University of Washington, Action Africa Help International, p 26.
[63] KPMG, The Devolution of Health Services in Kenya (2013), p. 9
[64] World Bank Working Paper No 193, Private Health Sector Assessment in Kenya, p.8
[65] Private Health Sector in Kenya, World Bank Working Paper No. 193, p. 6.

3. Poly clinics, nursing homes, diagnostic centres.
4. Hospitals, academic medical centres.

The private sector dominates in the nursing home segment and health clinics. The public sector and FBO/NGO sectors own most of the health centres and dispensaries. The latest figures on the number of private health facilities is not easy accessible and the most comprehensive data stems from the Kenya Health System Assessment 2010 (see table 8).[66] Whereas the public sector has a few level 5 and 6 so-called tertiary hospitals which include national teaching and referral hospitals - the private sector does not (yet). The private sector health service provision starts at the level 4 of primary hospital.

Type of Facility	Number
Primary Hospitals (level 4)	40
Other Hospitals (level 4)	152
Health Centres (level 3)	248
Dispensaries (level 2)	963
Nursing Homes (level 3)	152
Clinics (level 2)	1921
Laboratory – stand alone	52
Stand-alone VCT clinics	38
Dental Clinics	11

Table 8: Number of private healthcare facilities

The FBOs can be divided into 3 sub-players:

1. Kenyan Conference of Catholic Bishops (KCCB) who have many Catholic mission hospitals that are often viewed as good and affordable care centres. KCCB has currently 453 health facilities, 18 Medical Training Colleges (Nursing, pharmacy and Clinical Medicine) and more than 46 Community Based Health and OVC Programs.[67]
2. Christian Health Association of Kenya (CHAK) a protestant membership based organization consisting of about 507 health facilities spread all over the country.
3. Supreme Council of Kenyan Muslims (SUPKEM): registered as the umbrella body of all Muslim organisations, Societies, and groups in Kenya. The Council also coordinates health activities and services provided by Islamic facilities and institutions.

The FBO facilities are a good alternative for people who do not have sufficient funds to go for treatment in the higher level private facilities but are able to afford some level of quality care as the FBO facilities in general offer good quality health services for an affordable price. FBOs have an agreement with the MOH whereby the MOH seconds a certain number of health workers to the health facilities.

Where there is clear data on the number of private healthcare facilities, there is "*inadequate reporting to the MOH Health Management Information Systems (HMIS) on patient visits and client registries.*"[68] It is therefore very difficult to provide reliable data on the number and type of services obtained from the private health sector.

[66] Kenya Health System Assessment, p 10
[67] Source: http://www.kccb.or.ke/home/commission/12-catholic-health-commission-of-kenya/, d.d. 29 April 2016.
[68] World Bank Working Paper No 193, Private Health Sector Assessment in Kenya, p.8

2.5. Medical Tourism

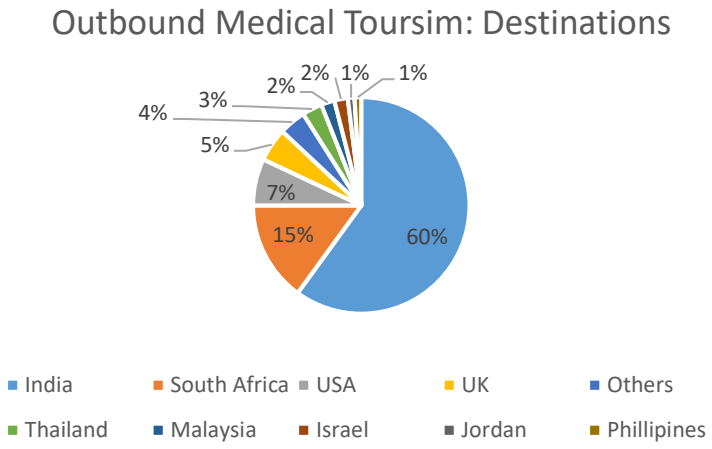
The Kenya Vision 2030 is part of the GOK and the national long-term development policy that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of live to all its citizens by 2030 in a clean and secure environment.[69] In 2030 the Vision 2030 Delivery Secretariat (VDS) reviewed the health sector and it became clear that there is a growing market for health tourism to Kenya. This means that Kenya as a country needs to become a strong competitor to other Medical Tourism nations, especially on quality and price. The GOK acknowledges that Public Private Partnerships (PPPs) are essential to deliver quality health tourism in Kenya.

Currently approximately 7000 to 10,000 Kenyans are traveling abroad to fulfil their healthcare needs. This is equal to about KES 7-10 billion (approx. USD 70-100 million).

The health services that are usually sought abroad are divided as follows:

- Cancer related 37%
- Renal related 21%
- Cardiac related 19%
- General surgery 23%

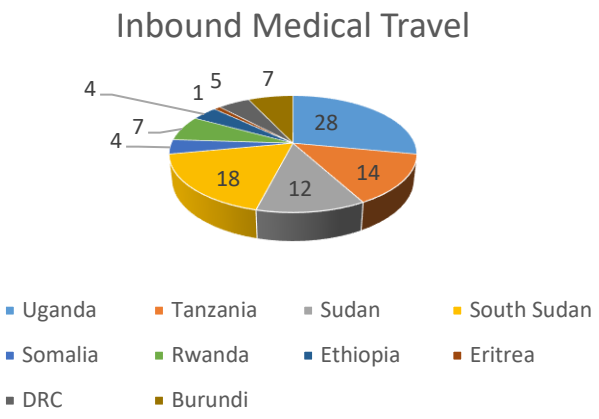
The large majority of Kenyans who are traveling to seek medical care go to India (60%). The below chart sets out the other medical destinations for Kenyan travel. The average amount of money spent on healthcare abroad is estimated at KES 1 million (USD 10,000,-), whereby it is reported that patients traveling from Kenya are saving between one third to half of the total treatment costs by seeking care abroad.[70] Besides affordability, the short hospital stay, short waiting time and high quality services are reasons why Kenyans travel abroad for further treatment.



Graph 4: Outbound Medical Tourism – Countries

Apart from Kenyans traveling abroad to seek healthcare, there are also approximately 3,000-5,000 foreigners each year that seek care in Kenya (inbound medical tourism). This translates to an approximated amount of KES. 3billion annually.

[69] Source: http://www.vision2030.go.ke/index.php/about-vision2030/, d.d. 25 May 2016.
[70] Government of Kenya, Health Tourism Strategy 2013-2030, p. 9.



Graph 5: Inbound Medical Travel – Country overview

The type of services that are being provided to medical travellers coming to Kenya are divided as below:

- Surgical procedures (General Surgery, Orthopaedics, Dental) 41%
- Renal treatments 20%
- Cardiology and heart procedures 18%
- Oncology 15%

A survey by the VDS established that the average amount spent in Kenya by foreigners on health care is about KES 500,000 (EUR 4350,-) per visit.

In 2013, the GOK and MOH have put the strengthening of Kenya as a health tourism destination high on the Vision 2030 strategic agenda and it is the *mission "To keep Kenyans in Kenya and bring Africans to Kenya through the development and provision of world class specialized healthcare products, technologies and services"* [71]

The goal of this strategy is to support the improvement in specialized medical services and the health system infrastructure in Kenya, as well as to contribute to the national economy by growing Kenyan medical exports to African and other markets. The strategy will be implemented in several phases, beginning with building and retaining key expertise within the country and thereby allowing Kenyans to get the care they need from within the country, and promoting the country as a destination for health and specialized care for other countries in Africa and beyond.

Kenya is the only country in Africa that has established a medical tourism strategy and is thereby unique in the region by not only having the vision to increase the number of patients traveling to Kenya to receive healthcare and bringing the outflow of patients abroad down, but as a country who has taken the medical tourism strategy as a key priority.

[71] Government of Kenya, Health Tourism Strategy 2013-2030, p.15.

3. Market Structure

3.1. Main Stakeholders

Following chapter 2 about the Kenyan Healthcare System, this chapter provides additional information about relevant stakeholders active in the Kenyan healthcare market.

3.1.1. Public Sector

The Kenya Medical Supplies Authority (KEMSA) is a state owned medical logistics service provider with the core mandate to procure, warehouse and distribute medical commodities to the public sector. With the implementation of the KEMSA Act in 2013, KEMSA transitioned from a Public Agency to a Public Authority which provided it greater autonomy and has a priority over other private distributors when it comes to selling to public sector facilities. Both national and local level facilities are by law obliged to first purchase from KEMSA and only if the supplements are not available they are able to source their supplies from other (private) sector distributors.

KEMSA procures health commodities based on budget it receives from the Ministry of Health (pre devolution). It then manages the receipt of these commodities from national and international suppliers to its warehouses in Nairobi. The health commodities are then stored at KEMSA's warehouses and later distributed to over 4,000 public health facilities, some of which are at considerable distances from the main warehouse in Nairobi (see figure 1). The list of medicines is not very large and mostly includes generic pharmaceuticals. The distribution to rural health facilities (RHFs) occurs on a quarterly basis based on quantities requisitioned by the health facilities, while hospitals and larger urban health facilities receive more frequent deliveries.

Transport from the KEMSA warehouse to the health facilities is carried out by private transporters that are contracted on a long term basis. The transporters use a combination of ten-ton trucks and smaller vehicles to make the deliveries to the health centres. The transporters collect a Proof of Delivery (POD) to verify successful and timely delivery. PODs are used to trigger payments to the transporters.

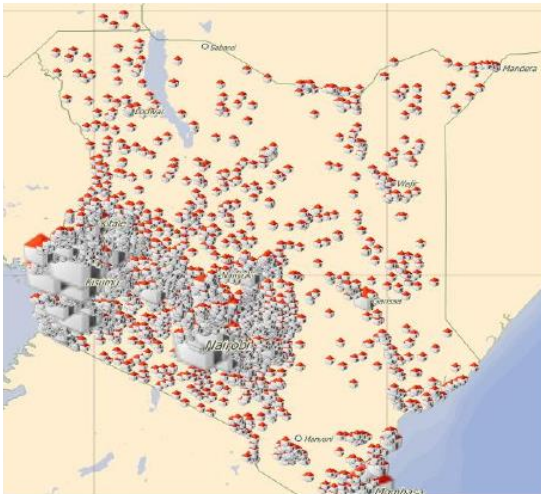


Figure 1: Map of facilities to which KEMSA distributes.

KEMSA also has eight regional depots (Eldoret, Garisa, Kakamega, Kisumu, Meru, Mombasa, Nakuru, and Nyeri). These depots are used mainly as storage depots for overflow commodities when the warehouse in Nairobi is full or in cases when health facilities do not have sufficient storage space.[72]

In 2010 it has been estimated that KEMSAs purchases are 30% of all prescription drugs in the Kenyan market.[73]

[72] Kenya Medical Supplies Agency (KEMSA), A case study of the ongoing transition from an ungainly bureaucracy to a competitive and customer focused medical logistics organization – a study for the World Bank, p. 4.
[73] Pharmaceutical Sector Profile: Kenya (UNIDO), 2010

3.1.2. Private Sector

The largest private sector distributor of essential drugs and medical supplies is the Mission for Essential Drugs and Supplies (MEDS). MEDS is a Christian not-for-profit organization and serves as a medical distributor for FBO facilities that are part of the partnership of KCCB and CHAK. Previously, only FBO facilities were able to access affordable supplies from MEDS but the organization is slowly taking on a more liberal style and slowly welcoming commercial private sector facilities that serve the lower quintiles of the society as well.

The commercial private health supply chain has many players and a stiff competition. Currently there is no regulatory system in place for medical equipment. A party importing medical equipment only needs to list the products which approximately takes 3 weeks. The PPB is currently in the process of drafting the guidelines for medical equipment regulations which they hope will be ready by 2017.[74] The current listing price for medical devices and consumables is set at USD 100,- per product. The GOK charges 16% VAT on all medical devices that are bought and 0.75% on importation (compared to 2% in Tanzania and Uganda). Which is quite high compared to other countries where medical devices are often VAT exempt.

In neighbouring country Tanzania, medical equipment is already regulated and it is perceived as not too tedious as the process generally takes 6-8 months. Other East African countries are in the same process as Kenya (Uganda, Rwanda and Burundi) and are all coming up with suitable guidelines to regulate medical equipment.

The pharmaceutical registration process depends on the category of the product. For priority drugs the official response time is 3 months. If it is not a priority drug the timelines can be extended to 12 months. Once the PPB has responded the evaluation process will start, including a side visit to the manufacturing plant. This process until finalization can take about 2 to 3 months. In total one should keep about 1.5 year in mind to complete the full registration process. The costs associated with registration of pharmaceutical supplies are outlined as per follows:

- Registration fee: USD 1,000
- Site inspection fees: USD 4,000
- Registration analysis between: USD 300-1,000
- Annual licence retaining fees local: USD 150
- Annual licence retaining fees international: USD 300

The total pharmaceutical registration costs would come to about USD 5,500 which is lower than the costs in Tanzania (USD 7,000) and Uganda (USD 6,000)

The clearing and forwarding costs in Kenya are similar to the neighbouring countries. But Uganda and Tanzania (10%) are a bit higher compared to Kenya (7-8%).

About 70% of Kenya's (generic) pharmaceuticals comes from India, Bangladesh, Pakistan and China. But the country also has branded medicines from large multinationals as GSK, Pfizer, Novartis, Roche, Astra Zeneka, Ringelheim, etc. In regard to medical equipment Kenya imports from different countries, the largest medical equipment companies that have presence in the country are: Philips, GE and Medtronic. But there are many other brands available in the market via distributors or local agents. Smaller medical equipment and disposables are largely being imported from Asia.

[74] In this regard one should note that the previous deadline for guideline completion was set early 2016, a deadline which was not met.

The Kenyan medical equipment and pharmaceutical distributors are able to have competing products in their portfolio and there are scenario's whereby the Kenyan company only offers a distribution platform but the product sales team are responsible for sales. A distribution company can also take care of both. Furthermore there is an increasing interest in arrangements where medical equipment is leased and serviced. A growing number of medical distribution companies are having a technical team who can handle the servicing of equipment and will provide this to the healthcare facilities. Credit collection in the medical supply chain is stated to be difficult. It is therefore that many private distributors have a wide spread and have key relationship managers plus a support team that manage the accounts.

Kenya has a niche market for high tech innovative products but the marketing of these type of products might prove to be costly. However the GOK is trying to upgrade their hospitals for the growing and the middle class is emerging and economy is growing which provides a lot of potential. Compared to other regional countries Kenya has a higher spending power and ahead in technology.

3.1.3. Non-Governmental (Donor) Organisations

Kenya has a wide variety of NGOs and donor organizations that are active in the country. In the health sector, USAID is by far the largest donor with current and previous projects in various sub-fields supporting both the public as the private health sector. Other large multilateral donors in the health sector are: IFC/World Bank (Health in Africa Initiative), World Health Organization, DFID, JICA, GIZ and DANIDA. Furthermore there are many larger to smaller NGOs active in the Kenyan healthcare space of which the Dutch PharmAccess Group is an innovative frontrunner in several fields.

Table 9 provides an overview of the GOK National Health Budget by Source. 57% of the MOH National Health Budget for Development (health infrastructure investments) was coming from Development Partners (FY 2014/15).

Source	FY 2013/14		FY 2014/15		Increase in budget allocation (%) between FYs 2013/14 and 2014/15
	National health budget (KShs million)	%	National health budget (KShs million)	%	
MOH budget	36,218	100	47,362	100	30.8
Recurrent	20,325	56	26,061	55	28.2
Development	15,893	44	21,301	45	34.0
Development Partners	9,498	60	12,164	57	28.1
GOK	6,395	40	9,137	43	42.9

Table 9: National Health Budget by Source, FYs 2013/14 and 2014/15

The large development partners are united at a national level in a platform called Development Partners Health Kenya (DPHK). The members come together each month to discuss pertinent issues on the agenda and avoid duplication of efforts. The NGOs in health are united via a network that is called Health NGOs Network Kenya (HENNET). The organization of HENNET in the past years has been rather weak, however there are current efforts ongoing to strengthen the network and its impact as a group.

The Medical Credit Fund

The Foundation Medical Credit Fund (hereafter to be called the Medical Credit Fund, or the Fund) is the first and only fund dedicated to providing loans to small and medium-sized healthcare facilities in Africa. To this end the Fund makes investment capital available for healthcare providers and combines this with technical assistance, hereby enabling healthcare providers to strengthen their business case, increase capacity, and improve the quality of healthcare services provided.

Loan sizes range from USD 1,000 to 350,000. The majority of the healthcare facilities in the program offer primary outpatient care to local surrounding low-income communities, including HIV/Aids Care and Maternal and Child Health. Medical Credit Fund co-finances or partially guarantees loans with local bank partners, which disburse the loans to healthcare facilities. As MCF's mandate is expanding to cover loans up to USD 2.5 million, so is the fund's target group: MCF is increasingly looking at larger healthcare facilities, such as district hospitals, specialist hospitals and other enterprises in the healthcare value chain such as diagnostic centres and pharmaceutical wholesalers. Medical Credit Fund is active in sub Saharan Africa and has offices in Kenya, Nigeria, Ghana and Tanzania. Up to 30 June 2016 MCF disbursed 868 loans to a total value of over USD 16 million.

3.1.4. Insurance Organisations

There are various insurance organisations active in Kenya.

National Hospital Insurance Fund

As mentioned earlier in this report, the NHIF is Kenya's national health insurance and has been putting increased efforts in expanding its membership base. The NHIF is mandatory for formal employees (2.9 million) and optional for others. Over the past 5 years, via the HISP, efforts have been ongoing in strengthening the membership base at the informal sector. This has reaped fruits and the current level of membership for informal sector stands at 4 million, making the total members of NHIF approximately 7 million. Based on a population of 46 million, NHIF currently covers 15% of all Kenyans.

NHIF has not (yet) been involved in technology investments but is open to more innovative technologies that can benefit the NHIF and reduce cost. As a future strategy, NHIF sees a bigger role in influencing technology and in line with this an innovation center has been proposed within the NHIF. Another point of focus within the NHIF will be towards preventive healthcare as recently the Fund has included outpatient services in its package offering. Screening for different diseases would be an option for expansions of the insurance package.

Private insurance companies

Currently approximately 1.5 million lives in Kenya are covered via private healthcare insurance. The largest health insurance is Jubilee with an estimated market share of 26%, followed by AAR Insurance at 17% and UAP with 14%. In total there are about 15-20 companies that over a health insurance cover, but for most of these companies the health cover is a by-product and not their main insurance activity.

Kenya has a small health insurance population on which most private healthcare providers rely for their schemes. Kenya ranks 2nd highest in terms of healthcare costs (after South Africa). The challenges below drive up the costs of healthcare. Therefore private healthcare insurers need to increase the prices of an insurance cover. Another challenge is that private insurance companies are all targeting the same clients, being the working class who receives a health cover as an added benefit to their work contract. The insurance companies compete on price, service quality, provider network and services covered.

Cost drivers for private health insurers

- *Small size of the private health market*
- *High technology use which drives costs (CT/MRI scans)*
- *Limited supply of high quality healthcare providers. There are currently 5 major providers serving the entire population. The demand is therefore high and their prices, due to their position, are quite high.*
- *Demand for equipment in Africa is lower which increases the price.*
- *Number of qualified health professionals is low. Compared to the region Kenya is doing better, but still far beyond the WHO recommended amount.*
- *Inflation is quite high. 15% increase cost of service per year. Attributable to the demand and the fact that the majority of healthcare supplies are imported (currency fluctuation with the USD).*

Dutch involvement in Kenyan health coverage

The Dutch PharmAccess foundation is, through the Health Insurance Fund, actively engaged in 3 projects increasing the number of Kenyans with a health cover:

1. *The Community Healthcare plan (TCHP)*

Established in 2011, together with health insurance company AAR Insurance, PharmAccess developed a health plan for Dairy farmers who sell their milk to Tanykina Dairy Plant Ltd. In 2013 the program was extended to the general population and into new neighbouring areas of Nandi North. AAR is responsible for the marketing, sales and administration of the plan.

2. *DL Koisagat Medical Scheme*

Established in 2012, PharmAccess set up a medical plan that provides primary and maternal care services to the families of employees and green leaf suppliers of the Koisagat Tea estate. The program is in partnership with the DL Group of Companies and Africa Medilink ltd. PharmAccess provides technical assistance to the project.

3. *Bima*

Together with initiator Kisumu Medical and Education Trust (KMET), who represents private healthcare providers, AAR Insurance (underwriter), Africa Medilink (third party administrator), and Safaricom (mobile technology partner), PharmAccess (technical assistance) set up Bima Poa, a provider based healthcare plan in the Kisumu region.

Furthermore, and through the African Health Markets for Equity (AHME) partnership, PharmAccess supports the NHIF with the development and implementation testing of the Health Subsidy for the Poor (HISP) program for the indigent population of Kenya. [75]

[75] Source: http://hifund.org/index.php?page=health-plans-in-kenya, d.d. 27 June 2016 .

3.2. Kenya's Healthcare Market

3.2.1. Medical Devices

In 2014, the Kenyan medical device market is estimated at USD 106 million, or USD 2.3 per capita. The market is expected to grow by a 2014-2019 CAGR of 9.2% in US dollar terms, reaching USD 165 million, or USD 3.2 per capita[76]. Patient aids are expected to have the highest growth over the 2013-2018 period.[77] On the one side the leading private sector hospital groups are stressing the importance of high level branded equipment and you can find hospitals with the latest, most expensive, medical devices. However, on the other side the Kenyan market is very priced-oriented whereby many players do not have the luxury to choose from a wide range of devices due to costing implications.

Import and Export

Forecasts of IBM show that the medical device import performance will improve in 2016. However, the currency depreciation could temper import values a bit.

It is the expectation that export values will remain low, but the performance will improve throughout 2016 as Kenya's key trade partners will experience strong economic growth over the next 5 years. In the 3 months to December 2015, exports increased by 65.6% (USD 2.3 million) and fell by 24.5% (USD 6 million) in the 12 months to December 2015.[78]

Projected Medical Device Market, 2014-2019[79]

Year	Total (USD million)	Per Capita (USD)	Total (Local currency million)	Per Capita (KES)	Exchange Rate (KES/USD)
2014	106.3	2.3	9,348.4	205.3	87.9
2015	114.5	2.4	10,937.3	234.0	95.6
2016	123.2	2.6	12,352.3	257.6	100.3
2017	138.0	2.8	13,763.8	279.9	99.8
2018	151.8	3.0	15,253.2	302.6	100.5
2019	165.0	3.2	16,872.7	326.7	102.3

Distribution

Getting and staying in touch with end users of medical supplies from abroad is not easy in Kenya, it is quite costly and time consuming. Kenyans prefer to do business with a person they physically can meet and know instead of a company far away. The pre- and after sales service is very important and therefore most foreign companies are doing business through agents and medical distributors who represent the brand and sales. Multinationals like Philips and GE have their own sales teams and distribution channels as providers purchase from them directly. When you are a Small or Medium Sized Enterprise (SME) it is advised to look for an agent/distributor in the capital city of Nairobi as that is the hub of the country (and East Africa) and the large majority of the headquarters and health facilities are based in and around the city. Most large distributors have sub-locations in the country from where they do their regional businesses. Annex 6 provides an overview of the main medical distributors in Kenya.

[76] http://www.espicom.com/kenya-medical-device-market.html
[77] Source: http://www.prweb.com/releases/2018-medical-devices/industry-analysis/prweb11250870.htm, p.p. 24 May 2016
[78] Espicom Business Intelligence, Kenya Medical Devices Report – Executive Summary
[79] Espicom Business Intelligence, Kenya Medical Devices Report – Executive Summary

Medical and pharmaceuticals supplies (public sector)

In Kenya, public tenders can be found in different sectors and at different levels:

KEMSA

The largest source of public procurement in Kenya, Kenya Medical Supplies Authority (KEMSA, for more information see section 3.2.1.) uses 4 forms of procurement:

1. Open International Tenders: Whereby the bidding is open to suppliers worldwide.
2. Open National Tenders: Whereby the bidding is open to local Kenyan suppliers only.
3. Restricted Tenders: Whereby bidding is only allowed for selected suppliers.
4. Direct Procurement: From Government Agencies only.

National and local level facilities are by law obliged to first purchase from KEMSA and only if the supplements are not available they are able to source their supplies from other (private) sector distributors. KEMSA procures medical supplies for County Governments, Referral hospitals, and for programs funded by donors. Most tenders run for a 2 year period. KEMSA does not receive direct funding from the GOK, it relies on a revolving fund which is depending on the payment from the public purchases and has program support partnerships with: UNICEF, Global Fund, DFID, USAID, KFW, UNFP, and JHPIEGO.

GOK funded programs have a preference for local suppliers and range from 6-12%. In the period from January 1 to December 31 2007, KEMSA carried out approximately 196 procurements of total value Ksh 3.8 billion.[80]

County Governments

The 47 counties procure goods from KEMSA and the private market under rules and guidelines of the Act (see Annex 7). Most of the purchases from the county are being done from KEMSA, however they can also procure by a tendering process. Most of the county tenders are posted on the county website or can be tracked by private companies offering tender alerts.

Referral Hospitals and the Department of Defence

KNH, Moi Teaching Referral Hospital and the Armed forces also have two year tenders. These are National Open tenders. The tenders are advertised in the local dailies, on the treasury website and are governed by the Act.

Parastatals

Organizations such as Kenya Medical Training College, Kenya Bureau of Standards etc. also advertise tenders. Many are project specific, however they also run one or two year tenders.

All the above tenders should be advertised on the treasury website and follow the Act:
http://supplier.treasury.go.ke/site/tenders.go/index.php/public/tenders

The Medical Equipment Services (MES) project

Since 2013 the GOK had set out large tenders for medical equipment infrastructure modernization program. The MES project has been designed to cover six key areas namely; dialysis, emergency, maternal-child health, basic and advanced surgery, critical care and imaging services. To address these areas, the equipment were placed under seven Lots or

[80] Kenya Medical Supplies Agency, Procurement Review, 1 January – 31 December 2007- Final Report (2008), p.20.

categories; Theatre, Sterilization, Laboratory, Dialysis (Renal), Intensive Care Unit and radiology which covers imaging (X-ray). More information can be found at page 19 and via http://www.health.go.ke/the-managed-equipment-services-mes-project-explained/

The GOK plans tenders for USD 600 million worth of new contracts for the supply of all medical equipment from 300-bed hospitals to oxygen plants and IT systems.

Medical and pharmaceuticals supplies (private sector)

Non-governmental actors such as NGOs, FBOs, public health agencies and donor funded agencies are the second largest group for tendering processes. They all follow their own procurement processes either governed by their funding organization or their own ethos.

MEDS

The largest private procurement partner in the health sector is MEDS and second largest procuring entity in Kenya after KEMSA. They supply to not- for- profit organizations and are slowly letting in the lower level of private healthcare providers.

They run annual tenders for most of their procurement, but also have a 3 year tender for some of their supplies. Tenders are usually found in the daily newspapers (Daily Nation/Standard), via their website or you can subscribe to a tender alert-service whereby you pay a company a certain fee to provide you with the latest tender alerts in the sector.

Red Cross (KRC, IFRC, ICRC, NRC)

The Red Cross procures by tender or quotation to registered and prequalified suppliers.

Others

These are stakeholders such as MSF, PS Kenya, AMREF, and Private Hospitals. Most private hospitals have tender or quotation based systems and suppliers need to be prequalified. Tenders are usually found in the daily newspapers (Daily Nation/Standard), via their website or you can subscribe to a tender alert-service whereby you pay a company a certain fee to provide you with the latest tender alerts in the sector.

Importers, Distributors and Wholesalers

There is a fine line between each of these categories, although most companies often perform all three functions. Most importers and distributors supply goods to the public and private procurement chain discussed above. The wholesalers supply goods to the retailers and to the smaller clinics and outlets.

3.2.2. Hospital Build

In Kenya, and Africa in general, there are very few local firms who specialise in hospital build and architecture for the simple reason that the number and size of projects is not large enough for such a specialised company to be sustainable. It was estimated that about 95% of the East African architects do “everything” and are not specializing on a sector in specific.

Local architects tend to have lower rates and have more knowledge on locally available building materials and the rules and regulations. However, there is a trend on-going in the (private) health sector

that hospital investors contract non-local architects (for example from the USA). International architects do the design and local Kenyan architects check if their plans are in line with the local approvals. The local Kenyan architects are open to the synergy of collaborating with international architects as they see the advantage of knowledge sharing, increasing their business and sometimes the hope of raising international funds when partnering with an international architect.

In terms of construction there are not many challenges. Kenya has many construction firms that are able to build a hospital or clinic. Even though the final decision maker is the hospital, for specifics in the building that does not directly affect the medical services it is often the contractor jointly with the architect who decides what type of solutions and materials are used.

Hospital realisation in the public sector

The GOK does not have large budgets for the development, expansion or renewal of public hospitals. In the last years, public sector building projects are often executed by Chinese companies as the GOK has secured several concessional loans with the Chinese Government.

One needs to have a good presence, contacts and "ears and eyes" on the ground in Kenya in order to be able to successfully bid for any public tender.

Philips Community Life Center in rural areas

In 2014, Philips inaugurated Africa's first Community Life Center at the Githurai Lang'ata Health Facility in Kiambu County, Kenya. An integrated solution for primary health care and service facilities that provides community development from a health care, lighting and healthy living perspective. Developed by the Philips Africa Innovation Hub and introduced in collaboration with the County Government of Kiambu in Kenya, the Community Life Center is a proof of concept that provides access to health care and at the same time enables social, educational and commercial activities after dusk and enhances safety and security of the neighbourhood. An important focus of the Community Life Centers is to address infant mortality and improve maternal health.

In May 2016, Philips, in collaboration with the UNFPA, has unveiled plans to inaugurate a new Community Life Center (CLC) in Mandera, Kenya.

3.2.3. Education & Training

In Kenya, the training for health workers is provided by colleges and schools from the public and private (commercial and FBO) sector. Health training institutions are registered and regulated by different regulatory authorities in Kenya. For example, Kenya Nursing Council regulates the training for nurses, the Medical Practitioners and Dentist board regulates the training for Medical Doctors. However, there is not one overarching regulatory authority that registers and regulates all health training institutions. Comprehensive information about the training institutions is not readily available as professional boards have a tendency to not disclose information.

One topic that is of continuous concern is the quality of education that is offered and the quality of the health worker students that have graduated. Over the years there has been a gradient growth in private sector health training institutions which assists in increasing the supply of health workers.

Kenya has four medical training institutions for Medical Officers: Nairobi University (public), Moi University (public), Kenyatta University (public) and Egerton Universities (private). There are 70 institutions accredited to train nurses, most of them public Medical Training Colleges (MTCs). See Annex 8 for a list of medical training institutions.

There are also a lot of NGOs involved in efforts to increase the amount and quality of healthcare and related workers.

Safecare

SafeCare was launched in 2011 by PharmAccess International and partners Joint Commission International (JCI) and the Council for Healthcare Services Accreditation (COHSASA) to introduce standards that enable healthcare facilities in resource-restricted settings to measure and improve the quality, safety and efficiency of their services and allow for rating and benchmarking of providers across the health system. It acts as the custodian of internationally recognized sets of standards covering the spectrum of basic healthcare for defined categories of providers, including general practitioners, nurse- or clinical officer-driven health posts, mobile and semi-mobile facilities, primary care facilities, community health centers, primary health centers and district hospitals. Reaching international accreditation seems (and often is) unattainable for healthcare facilities in resource restricted settings. However, with technical support from SafeCare and its partner organizations, facilities will be equipped to move forward in a stepwise approach. The standards address 13 areas of service delivery and offer a guided way to improve quality. Next to measuring performance, it provides a step-wise quality improvement program towards internationally recognized quality levels. Achievements are acknowledged through certification, which ultimately can lead to international accreditation. SafeCare increasingly partners with organizations, such as Ministries of Health, National Health Insurance Agencies and partner NGOs to use the SafeCare standards In their networks of healthcare facilities. Currently the standards are used in Kenya, Ghana, Namibia, Tanzania, Uganda and Nigeria.

FDOV Healthy Business Development Programme

Under the 'Facility for Sustainable Entrepreneurship and Food Security' (FDOV) of the Dutch Ministry of Foreign Affairs, the 'Healthy Business Development Programme' provides a service offering to healthcare SMEs that helps strengthen their business. In partnership with the Ministry of Health, Strathmore Business School, AMPC International Health Consultants, Medical Credit Fund and the IFC Health in Africa Initiative, the program offers "Mini Health MBAs", Executive Managing Healthcare Business Courses and coaching, as well as loans, quality assessments and business advisory services. Additionally, the project comprises a capacity building programme that helps county governments effectively manage their new task of public health service delivery, amongst other engaging medical superintendents of public hospitals in Healthcare Management Courses and through stimulating the

development of PPPs to engage the private sector to complement public sector efforts in providing healthcare to all.

AMREF's involvement in training & education

Amref Health Africa is an NGO that has put in significant efforts to increase the quality and training of health workers. Since 2007, the institution offers eLearning methodologies and innovations for training of nurses via the AMREF Virtual Training School. In 2012 there were 438 students enrolled and 300 had graduated thereby upgrading their nursing skills. Besides this AMREF offers the following health training courses: Diploma in Community Health Course, BSc in Community Health and Masters in Public Health.[81]

3.2.4. eHealth

The Kenyan eHealth Development Unit falls under the stewardship of the Division of Health Informatics Monitoring & Evaluation housed at the MOH.[82] The linkage between the Ministry of ICT and MOH is currently very weak as there is no substantial linkage between the MOH and ICT department within the GOK. The MOH of Kenya is using the WHO definition on eHealth: *"the combined use of electronic communication and information technology in the health sector".* Practically this means: *"ensuring that the right health information is provided to the right person at the right place and time in a secure, electronic form to support the delivery of quality and efficient healthcare."*[83]

The Kenyan e-Health strategy 2011-2017[84] is the e-Health specific policy tool and has 5 areas of implementation:

1. Telemedicine
2. Health Information Systems
3. Information for Citizens
4. mHealth
5. eLearning

The MOH states that telemedicine is a main priority area. Table 10 sets out the definitions that the MOH uses when it comes to the eHealth implementation areas.

	Definition	Location	Users	Data Entry
Telemedicine	The use of telecommunication and information technologies in order to provide clinical health care at a distance.[85]	Public (MOH) and private sector	Healthcare providers	Healthcare professionals at provider level
Health Information Systems	A comprehensive and integrated structure that collects, collates, analyses, evaluates, stores disseminates health and health	DHIS – public (MOH and in the public facilities)	MOH, health providers, private sector (limited) and other interested parties	At Facility level (nurses/data clerks)

[81] Source: http://amref.org/info-hub/capacity-building/basic-and-post--basic-training/, d.d. 9 August 2016
[82] See Annex 2 for MOH Organizational structure.
[83] Kenya National e-Health Strategy 2011-2017, p. 8
[84] Kenya National e-Health Strategy 2011-2017, p. vi
[85] In the Kenyan national documents telemedicine is not further defined. This definition is obtained via: https://en.wikipedia.org/wiki/Telemedicine, d.d. 9 December 2015.

	related data for information and use by all.[86]			
Information for Citizens	Health information that is accessible and understandable for Kenyan citizens.	MOH	Kenyan citizens	N/A
mHealth	Mobile Health used for the practice of medicine and public health with support of the mobile phone (system).	Public (MOH) and private sector	Kenyan citizens, NGOs, Private Sector, Public sector	Implementing partners or if MOH project MOH data clerks
eLearning	The effective use of technologies in learning and education systems.	Public (MOH) and private sector	Health workers, general public (potential)	N/A

Table 10: HIS definitions according to the MOH.

In all of the above sub-sections of eHealth, initiatives in Kenya are ongoing. There are many eHealth technologies, seeking to address varying challenges, introduced every day, but the country is lacking a local tracking mechanism on who does what and how. Reasons for the high ranking of Kenya in comparative eHealth list is because the entrepreneurial energy and skilled labour in the country is great and pushes people to be innovative. However, the challenge has been to scale-up the eHealth innovations as only 44% of the initiatives have been able to scale. The challenge is to build solutions and products that make economic sense and meet a real need in the market. [87]

Due to a high penetration rate of mobile phones, mHealth is more developed than telemedicine services. The challenges with telemedicine are that there is a lack of guiding policy documents. There is also no legislation to protect the patient in terms of confidentiality, which makes healthcare providers hesitant to start telemedicine services. One can say that the ambitions towards eHealth in the country are there, but practice is lacking behind. However, there are some (mostly private) healthcare providers that offer specialist telemedicine services. These initiatives are mostly doctor-driven and will move from the facility if the doctor moves.

Mobile phone penetration in Kenya: fertile ground for innovation

Compared to other African countries, Kenya has a high mobile phone penetration. According to the Communications Authority of Kenya (CA), the mobile phone penetration (in the first quarter of the 2015/16 financial year) stood at 88.1% with 37.8 million subscribers compared to 36.1 million the previous quarter. Pre-paid subscriptions dominate the mobile telephone sector as they account for 97.3% (36.8 million subscribers). [88]

According to the Digital Entrepreneurship in Kenya 2014 report, 99% of the internet subscribers in Kenya access the internet through their mobile phone. The country has been a leader in mobile banking with applications such as mPesa.[89] *Innovations in the healthcare sector and linked to mobile phones are therefore widely being developed. mHealth in Kenya primarily focusses on two core areas:*

[86] HSSP, p.xiii

[87] http://www.businessdailyafrica.com/Corporate-News/Only-44-per-cent-of-Kenya-s-e-health-technologies-thrive/-/539550/2359450/-/ksp67tz/-/index.html, d.d. 27 June 2016.

[88] Source: http://www.ca.go.ke/index.php/what-we-do/94-news/366-kenya-s-mobile-penetration-hits-88-per-cent, d.d. 27 June 2016.

[89] Source: https://www.techchange.org/2014/11/03/mhealth-challenges-opportunities-kenya-india/, d.d. 27 June 2016.

- *Data collection – whereby mobile devices replace or compliment paper based data collection tools*
- *Behaviour change – whereby mobile devices are used to share key messages to a specific (or wide) target group.*

Furthermore, and not specific to the healthcare sector alone, mobile phones and applications like mPesa are widely used to pay for services and goods. The majority of pharmacies, clinics and hospitals have a mPesa number whereby the patients can pay their bills directly with the use of the mobile phone. Furthermore, mobile phone applications are being used to save and borrow money for specific causes or events, such as health services.

Despite the high mobile phone penetration in the country, there remain challenges in rolling out mHealth interventions.

1. Many mHealth interventions do not survive the piloting stage. Mostly due to the fact that they are donor-driven and do not fit into the larger health and information technology systems. This is due to the absence of a clear scale-up strategy and lack of consensus on common requirements.
2. Many mHealth applications rely on the use of smartphones. However, the majority of the phone subscribers are low-end and use basic mobile devices that do not support an advanced operation system (for example Android or iOS).
3. Scarcity of a reliable power source. Electricity supply in Kenya is unreliable and regular electricity is mostly available only in semi-urban and urban areas. Since graphics-enabled smartphones are highly power-intensive, any mHealth project that relies on smartphones may face challenges if users struggle to keep their phones regularly charged.[90]

However, there are a lot of opportunities related to the development of mHealth in Kenya as well:

1. High mobile phone penetration, as mentioned in the above numbers.
2. Wide connectivity in the country with good internet connection. Recently introduced 4G network by Safaricom.
3. Several initiatives already on going in the mHealth sector, opportunity to link up with successful initiative and scale up.
4. The mobile phone system is widely accepted and trusted as a financing mechanism as many people use mPesa services to pay bills, save or take up small loans.

M-Tiba Health Wallet

One example of Dutch involvement in the mHealth sector is the M-Tiba Health wallet which adopts the technology of African bank transfer platform mPesa and keeps funds from donors and customers in secure accounts which can be used to pay fees to accredited healthcare providers. Partners in M-Tiba are Pfizer Foundation, Safaricom, and the Dutch PharmAccess Foundation and Care Pay.[91]

[90] Source: https://www.techchange.org/2014/11/03/mhealth-challenges-opportunities-kenya-india/, d.d 27 June 2016.
[91] Source: https://www.devfinance.net/mobile-payments-enable-access-to-healthcare-in-kenya/, d.d. 27 June 2016.

The GOK sees mHealth as an important sub-sector as the MOH has invested efforts in mHealth solutions. Their main private sector partner in this regard is 'mHealth Kenya Ltd'. It should be noted that mHealth Kenya Ltd receives most of its funding from international donor organizations such as CDC Foundation, UNICEF and WHO (amongst others).

3.2.5. Biotechnology and Laboratory

In 2013, Government of Kenya through Vision 2030 Medium Term Plan II made a commitment to making biosciences and biotechnology a priority focus for intensified vibrant cluster of innovations in response needs and improved quality of Kenya citizens.[92] Of particular interest are Biochemistry, Molecular Biology, Biomedical Engineering, Bioinformatics, Microbiology, Biomedical Technology, Bioengineering, Biology is Biotechnology with observed need to adequate resources, human and infrastructure and capacity strengthening for R&D and implementation of regulatory frameworks that reduce trade barriers among traditional trading partners.

Kenya has a large bio-diversity, qualified health research professionals and a large pool of drug-free patient populations making the country the ideal location to undertake clinical trials. Despite this, there has traditionally been a focus on having clinical research done in the so-called first world countries.

However the number of clinical trials in Africa, and also in Kenya, has been increasing. In Kenya, the majority by public research institutes with donor funding and a smaller number by multinational pharmaceutical corporations with local counterparts (for example GSK, Pfizer, Novartis, Sanofi and Astra Zeneka). A complete overview of trials in Kenya could not be established due to absence of publicly available information.

The main institutions in Kenya that are involved in the process of clinical trials are visible in table 11:

Name Institution	Description of involvement
National Council for Science and Technology (NCST)	Advisory body to the GOK
KEMRI	National body responsible for carrying out research in Kenya
Kenya Trypanosmiasis Research Institute (KETRI)	Only working on research on trypanosomiasis of animals and humans. Trypanosomiasis (also known as sleeping sickness in humans and nagana in animals) is caused by the bite of a Tsetse fly
MOH	Safeguarding the ethical issues and dilemma's raised during biomedical research.
PPB	Regulates clinical trials taking place in Kenya.
KNH	The KNH is an internationally recognised institution for conducting research on human subjects
UON/Moi University	Collaborates with the Kenyatta National Hospital/Moi University Hospital for most of it's biomedical research programmes.
Wellcome Trust	Collaborates closely with KEMRI
CDC	Conducts research mainly on malaria and HIV/Aids.
US Army Medical Research Unit Kenya	Develop and test improved means for predicting, detecting, preventing and treating infectious disease threats to military and civilians in East Africa

[92] http://www.kebic.or.ke/biotech-kenya.html

Kenya Aids Vaccine Initiative (KAVI)/Intarnational Aids Vaccine Initiative (IAVI)	NGO working to speed the search for a vaccine to prevent HIV infections and AIDS;
Pharmaceutical companies	Conduct clical trails for their product development.

Table 11: Main institutions active in Clinical Trials.[93]

3.3. Regulations, Standards and Taxes

According to the World Bank (2016) Kenya is ranked 108 out of 189 on the Doing Business Index. Rwanda (62) is the only East African country ranked higher. The index is based on the ease of doing business in a country and compares the rules and regulation of each country.

3.3.1. Regulatory Boards

The Ministry of Health at a national level is responsible for the regulation of health workers and health related practices in the country. Therefore the government has set up several regulatory boards who all have their own specialized mandate of regulations.

Organisation	Mandate
Clinical Officers Council (COC)	Regulates the training, registration and licencing of Clinical Officers. To date the COC has registered 13000 Clinical Officers.
Nursing Council of Kenya (NCK)	Established by the Nurses Act Cap 257 of the Laws of Kenya to ensure the delivery of safe and effective nursing and midwifery care, to the public, through quality education and best practices. It is the only professional regulatory body for all cadres of nursing and midwives in Kenya.[94]
Kenya Medical Practitioners and Dentist Board (KMPD)	Established under Cap 253 Laws of Kenya to regulate the practice of medicine and dentistry in the country.[95] The core functions of the KMPD are: Approving and supervising medical training that is being offered in different institutions, Registration of qualified Medical Doctors and Dentists (BSc. Minimum), Licencing of Medical Doctors/Dentists and internships and advise the MOH.
Pharmacy and Poisons Board (PPB)	Established under the Pharmacy and Poisons Act, Chapter 244 of the Laws of Kenya. The Board regulates the Practice of Pharmacy and the Manufacture and Trade in drugs and poisons.[96] In addition the PPB also regulates medical devices that come into the country.
Kenya Medical Laboratory Technicians and Technologists Board (KMLTTB)	Established under Cap 253 A of the Laws of Kenya. KMLTTB has a mandate to regulate all In-vitro diagnostics to be used in the country. In addition the board also screens, validates, certifies and registers products to be used in laboratory science practice. Furthermore it regulates the professional conduct of Medical Laboratory Scientists, Licenses and regulates business practices in Medical Laboratory Science, Inspects and approves Institutions to

[93] Vaishalee Patel, Clinical Trials in Kenya, SOMO, May 2016.
[94] Source: http://nckenya.com/about-us/, d.d. 26 April 2016.
[95] Source: http://medicalboard.co.ke/
[96] Source: http://pharmacyboardkenya.org/, d.d. 26 April 2016.

	train in Medical Laboratory Science and Registers medical laboratory Technicians and Technologist to practice.[97]
Kenya Nutritionists and Dietetics Institute (KNDI)	Established in 2007 under the Nutritionists & Dieticians Act No. 18 the KNDI is to provide for training, registration and licensing of nutritionists and dieticians; provide for the registration of the standards and practice of the professions and ensure their effective participation in matters relating to nutrition and dietetics. [98]
Public Health Officers and Technicians Council (PHOTC)	Established in 2013 by the Public Health Officers Act No. 12 the PHOTC is responsible for the regulation of training, registration and licensing of public health professionals in Kenya.[99]
Radiation Protection Board	Established in 1986 under the Act of parliament, the Radiation Protection Act, Cap 243, as the national competent authority with the responsibility for protecting the health and safety of people and the environment from the harmful effects of ionizing radiation. It regulates the use of ionizing radiation, exportation, importation, distribution and possession of radiation sources.[100]

Table 12: Kenya's health regulatory boards

Experiences with Regulatory Boards

Even though each Regulatory Board has its own prescribed mandate, in reality there seems to be a lot of overlap whereby different board claim to regulate the same product. For example when selling a stethoscope: According to the law the PPB is responsible for registering the product and licencing it. The party who would like to sell the stethoscope needs to pay the applicable fees to the PPB. However, the NCK claims that this product also needs to be licenced by them as "their nurses" will work with the stethoscope, thereby forcing the distributor to pay double listening fees and go to another licencing process.

This double practice is not allowed by law and the private sector has complained about this as it is significantly increasing the cost and ineffectiveness of doing health business in the country. Recently the CS issued a statement saying that the PPB is the only Regulatory Body in charge of licencing medical equipment and the NCK is operating unlawfully. However, the reality on the ground is that these double inspections/licensing are still going on in practices.

The Registration Dossier in regard to medical products registration/licencing (note: not regulation) in Kenya can be divided in the following steps:

1. Administrative Information
2. Supporting Documentation
    i. Executive Summary
    ii. Relevant Essential Principles and Method Used to Demonstrate Conformity
    iii. Device Description
    iv. Product Verification and Validation Documents
    v. Device Labelling
    vi. Manufacturer Information

[97] Source: http://kmlttb.org/, d.d. 26 April 2016.
[98] Source: http://www.kndi.institute/about-us/index.html, d.d 26 April 2016.
[99] Source: http://photc.org/about-us/, d.d 26 April 2016
[100] Source: http://www.rpbkenya.org/about_us.html, d.d. 26 April 2016.

3. Declaration

The PPB document (2011): Guidelines on Submission of Documentation for Registration of Medical Devices, sets out all the details of the registration process for medical devices.

3.3.2. Import Regulations

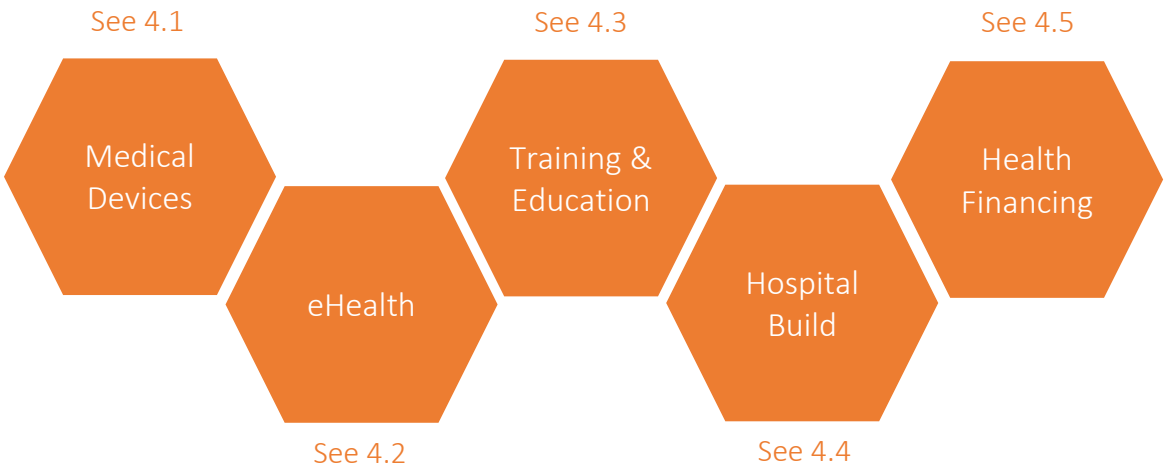
The Pharmacy and Poisons Board (PPB) is responsible for the import of all medical supplies. Pharmaceuticals are being registered and regulated by the board and currently medical devices and supplies (non-pharmaceuticals) only need to be listed. Listing takes approximately 3 weeks. The current listing price for medical devices and consumables is set at USD 100,- per product. The GOK charges 16% VAT on all medical devices that are bought and 0.75% on importation (compared to 2% in Tanzania and Uganda). Which is quite high compared to other countries where medical devices are often VAT exempt. The PPB is currently in the process of drafting the guidelines for medical equipment regulations which they hope will be ready by 2017.[101]

For pharmaceuticals no duty or VAT is charged. On medical equipment it depends what it is, and how the customs department views the product. Generally, medical equipment is charged 16% VAT. The clearing and forwarding costs in Kenya at 7-8% is a bit lower than the neighbouring countries Uganda and Tanzania (10%).

[101] In this regard one should note that the previous deadline for guideline completion was set early 2016, a deadline which was not met.

4. Business Opportunities

The Kenyan healthcare has multiple business opportunities to improve the overall quality, accessibility and affordability of healthcare services in the country. This chapter sets out the different opportunities for Dutch SMEs in the Kenyan healthcare market.



There has been a major shift in the dynamic environment in all the 3 subsectors in healthcare in Kenya (public/private/FBO). The public sector is now experiencing a devolved health system with 47 counties in Kenya that lends itself to some existing and new opportunities. Although, still in its nascent stages and the first term in a devolved health system in Kenya, the next 5 years after the elections in August 2017 will lend a new wave of PPPs in the health sector. As mentioned earlier in the report, the MES project for upgrading public hospitals is already gaining traction on how partnerships can be valuable.

Kenya's devolved or county system provides opportunities for the Dutch LSH sector to invest and enter in to partnerships at a local level in Kenya. Each of the 47 counties receives a budget from the national treasury based on certain indicators. It is up to each county how to spend these funds appropriately – including for healthcare. All counties receive a certain level of healthcare support from the national government, for example receiving equipment through the MES project. The provision of healthcare services remains the main responsibility of the county. Counties are obliged by law to issue advertisements in the local dailies (especially on Tuesdays and Fridays) if they would like to procure services or products.

Analysis of County Health Budget Allocations (see Annex 14) shows that the counties Njeri, Makueni, Nakuru, Kericho, Kiambu, Lamu, Isiolo and Taita-Teveta invest relatively more in health compared to the other counties.[102] From a Kenyan private sector perspective, experience has shown that the counties that seem to have a higher commitment to health are Makueni, Kisumu, Meru, Kericho and Machakos.[103] The county system is still young and a comprehensive overview of county-level healthcare projects and activities are not yet available. There are several initiatives in the pipeline to create a comprehensive database where this type of information can be found at once, however this is still in the preliminary stages and not accessible yet.

The FBOs and NGOs have played and continue to play a significant role in the provision of health services in Kenya. Through organised umbrella bodies, the coordination mechanism has significantly improved

[102] Ministry of Health, 2014/2015 National and County Health Budget Analysis Report
[103] Source: Based on the experience Kenya Healthcare Federation.

the value proposition that the subsidized health pillars makes to the citizens as they move to a sustainable self-reliant model. MEDS is an example of how collaboration can make distribution of medical supplies more efficient and affordable. The opportunities with these organizations lies in offering solutions in technology, design and training which will enhance their capacity, reduce costs and deepen the reach of their services throughout the country.

The middle class in Kenya has been growing directly proportional to the positive economic growth that Kenya has been posting for the past several years. In the social sector, the private health sector has been very vibrant with increased investments within health service delivery, supply chain, healthcare financing and innovation and technology sub sectors. The Eastern African region opens up a new market for cooperates that can now target up to 300 million people. With an English speaking youthful population, Kenya has the human capital to propel the innovations in all subsectors of healthcare.

4.1. Medical Devices (and supply chain management)

Kenya has currently not one medical equipment manufacturer within its borders and hosts about 42 pharmaceutical manufacturers and less than a handful of medical supplies manufacturing plants. The recent enactment of the Special Economic Zones Act (2015-SEZA) presents an opportunity for Dutch companies to invest manufacturing plants for medical supply to the region. There are various incentives envisaged in the Act which is soon to be operationalized once the regulations are presented for public debate and approval by Parliament. Opportunities under the Act for inspiring foreign direct investment are several tax incentives for investors such as exemptions and preferential taxes (including exemptions or preferential taxes from all existing taxes and duties payable under the Customs and Excise Act, income Tax Act, East African Community Customs Management Act and Value Added Tax Act on all special economic zone transactions) and stamp duty and work permit quotas. [104] [105]

In this field there is the potential to improve on imports of Dutch exports of medical-related items which, as per 2014 statistics of The Observatory of Economic Complexity indicate as constituting 8.2 % of all export of goods to Kenya. These are Packaged medicament (4.4%), special pharmaceuticals (2.2%), and medical instruments (2.2%).[106]

The large majority of medical supplies are being imported from Asia. Even though the affordability is considered to be acceptable, the quality is not always up to standards. There is a growing demand for quality, affordable medical supplies that are better than the current supplies being distributed.

Possible areas of exploration include, but are not limited to:

- Syringes
- Non-woven products such as masks, hair nets, gowns, etc.
- Catheters such as suction, feeding, etc.
- Assembly of rehabilitation products such as wheelchairs, crutches, etc.
- Bandages and plasters using locally available raw materials ie., cotton
- Infusions and infusion products
- Other medical diagnostics products such as malaria kits, HIV kits
- Latex products ie., condoms and gloves

[104] Source: http://www.industrialization.go.ke/index.php/media-center/blog/310-kenya-to-roll-out-special-economic-zones-in-first-quarter-of-2016, d.d. 9 August 2016
[105] Source: http://www.ey.com/GL/en/Services/Tax/International-Tax/Alert--Kenya-enacts-Special-Economic-Zones-Act-2015, d.d. 9 August 2016
[106] Source: http://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/ken/nld/show/2014/, d.d. 9 August 2016

One of the methods used to create more affordability is by creating economies of scale and Kenya has several networks and associations with an aligned high number of (private) healthcare facilities in which a distribution relation based on economies of scale can be explored. Currently these distribution channels are not yet in action, however we have been informed that the appetite at these networks and associations is present. Examples of some of these networks/associations are The Kenyan Association of Private Hospitals (KAPH) and the Association of Social Franchising for Health (ASFH).

Another opportunity in the medical supplies sector is to set up manufacturing plant in the country that will be supplying medical commodity supplies in Kenya and the wider East African region. The previously mentioned SEZA can be supporting this venture. There are a few leading manufacturers that are open to exploring joint ventures and partnerships. On example is Revital Healthcare, based in Mombasa, a leading producer of auto-disabled syringes.

Furthermore, an opportunities lies in providing technology and equipment for manufacturing lines. This can be in the setup of a new manufacturing plant or enhancing existing plants for upgrading.

Since 2013, the GOK, both at national and county level, has released a significant amount of funding to equip the county and sub-county hospitals with quality diagnostic equipment (the previously addressed MES project). It is the aim of the government to further improve the diagnostic services in the public facilities and it is therefore to be expected that more business opportunities (tenders) will arise in this area. Simultaneously, the private and FBO sector also aims to improve its diagnostic equipment as there is a huge unmet need. There are budgets available for high-end branded equipment in the health sector. The large private hospitals all have this type of equipment in their facilities and are in a way 'competing' with each other on brands and specifications.

There is a growing demand for both therapeutic and diagnostic medical equipment. It is very clear from the Kenyan health policy, and the growth of the private sector, that the following equipment will be required in the near future to meet the demands:

- Dialysis and all nephrology equipment
- Cardiac and related accessories
- Radiology diagnostic equipment's (e.g. CT scans, MRI Scans, ultra-sounds)
- Oncology (radio therapy delivery equipment e.g. linear accelerators)

Devolution and procurement

Since 2013, Kenya's government has devolved into a system where 47 counties have quite a high level of independent decision-making possibilities which also has its effect on procurement processes in the public health sector. The counties now have their own freedom, within the law, to procure healthcare services, supplies and equipment independent from the national government. It is therefore advisable for Dutch firms interested in doing business with the Kenyan public health sector to zoom in on specific counties that might be interested in their particular products or services and establish a relationship with these counties and get to know how to become a supplier/partner with that particular county. The budgets of some counties can be limited, in order to bridge the gap one can think of offering scaled-up solutions where economies of scale can reduce costing, i.e. partnering with several counties at once to reduce the costs and increase the attractiveness of the solution to the counties decision makers. Some counties have already organized themselves in economic blocks.

The Kenyan government, both at national level (KNH and Moi Teaching and Referral Hospital) and county level have put significant amounts of funding aside to re-equip the public hospitals with quality and essential diagnostic medical equipment. Since 2013 there have been several national tenders issued of which the managed medical equipment tender has been the largest (main supplier that has been appointed under this tender were GE and Philips). The counties are keen to create "Centres of Excellence" in their region which sparks a higher need for equipment to provide the services and therefore an opportunity for medical equipment companies to respond to tenders in this regard. Examples include Meru and Kakamega Level 5 hospitals which, through the respective county governments' initiatives are planned for a major upgrade to referral and teaching hospital status. Kenyatta University is also currently putting up two major hospital facilities (teaching and children), hence an opportunity to supply equipment.

Supply Chain Management

Kenya has 2 large national distribution institutions that are open for the public and mainly FBO sector (KEMSA and MEDS). Furthermore there are many private sector distribution companies supplying medical supplies, equipment and pharmaceuticals. One challenge that these partners encounter is finding a reliable service provider who is able to bring their product in good (cooled) condition to the customer/health facility. KEMSA/MEDS and some private distribution companies have their own couriers/cars/motorbikes/etc. to ensure delivery can be done in some specific regions. However, there are still geographic areas that are untapped and to which distribution needs to be outsourced. This provides opportunities for trusted distribution partners.

Several private sector firms are ready to partner with organizations that may add value in improving their storage, warehousing, logistics and customer service. This will require a partner who has an in-depth understanding of the supply chain management business as well as technology and systems to make it more competitive in the region.

4.2. eHealth

Health and ICT are slowly becoming more interconnected in Kenya and the development of new IT solutions in health offers a great opportunity for companies with a speciality in this particular sub-sector. Kenya has proven to be a frontrunner in the innovative IT space in general and also in the health sector. It is the only African country with a comprehensive eHealth strategy and the only country in the world with a multi-billion USD turnover of mobile money (mPesa) payments that is more and more being linked to paying for healthcare services (e.g. M-Tiba and CarePay – founded and implemented by the Dutch PharmAccess and Safaricom).

Recommendations for investments in eHealth technologies in Kenya are:

- Create technologies that sort out procurement challenges in hospitals.
- Create easy-to-use systems. If solutions seem complicated and complex people tend not to use them.
- Use existing technology platforms to build products/solutions on
- Do not work in isolation but partner with local partners who can offer tips and provide linkages to key stakeholders.

Serious Gaming

In line with eLearning lies the opportunity for including Serious Gaming solutions into the refresher courses for medical staff. We have been informed that it is difficult for the facilities to monitor the

medical staff when it comes to the mandatory uptake of refresher courses. The main reason why medical staff is not keen on taking these courses is because they are repetitive, boring and not interesting. If there would be a Serious Gaming solutions for the regular refresher courses, the facility can easily track the progress and for the medical staff the course has been made more interesting and challenging increasing the changes for the uptake.

Health Management Information Systems (HMIS)

Many facilities, being either in the public or private sector still operate largely with paper-based systems. The larger private hospitals in the main cities have developed HMIS systems which can be just as developed as systems in the West. However, there is still a large un-tapped market in this sub-sector with a lot of opportunities for systems that are easy to use, affordable, interconnected and innovative.

Big data and Monitoring and Evaluation

With the growing complexity of improved equipment and technology in the healthcare industry, there is need for sophisticated Command Centre and Monitoring and Evaluation processes to enable the health managers to appropriately track progress of the delivery of care. Enterprise resource planning (ERP) solutions that make the sector efficient and effective.

Telemedicine

There are opportunities to invest in telemedicine and its related applications that offer to bridge the geographical barrier in accessing affordable, quality healthcare services throughout Kenya. Several trials and pilots have been tested and many are ongoing (for example in Lamu between Huawei and Safaricom), but none of the solutions have made a national impact as yet.

4.3. Training & Education

First of all, there are quite a few clinic chains with one or two main hospitals that require experienced hospital managers to undertake the operations of the group. Traditionally in Kenya, hospitals were set up by a doctor or nurse who are medical professionals but not necessarily management professionals. The realization has come that one does not need to be a doctor to run a successful hospital or chain of medical facilities and the market is therefore opening up to outsourcing the management to parties with hospital management experience. County governments have showed interest to outsource the management of one or more of its hospitals to a private hospital manager in order to create more efficiency and affordability of services. There have been discussions regarding this model and the interest at some counties to explore this kind of PPP model is definitely present.

Capacity and quality of training of health workers is a continuous concern in Kenya. Over the years there has been a gradient growth in private sector health training institutions which assists in increasing the supply of health workers, particularly in the private sector where there is a large shortage of workers being able to work up to their standards. These institutions tend to be open for more efficient and effective methods and there is an opportunity for Dutch knowledge institutions to partner in this regard. One can think of providing curriculum development, training content, problem based learning and eLearning. Kenya is also strategically positioned to be a regional hub for medical training given it's already a hub for medical care and would therefore be ideally suited to set up a new medical training institution. See Annex 7 for a list of medical training institutions.

Any IT solutions that can bring knowledge sharing and improvements closer to the student/health worker and at a more affordable cost is very much welcomed. Currently, there are several initiatives ongoing and being piloted; however there is a lot of space in this area given the fact that Kenya has a high mobile phone penetration, many remote rural areas that are now connected to the internet. There

is a high health worker shortage which gap can be (partially) filled by providing E-Learning solutions and quality improvement courses for health workers to keep up with the latest trends in developments in the treatment of patients.

4.4. Hospital Build

As the economy in Kenya is growing and the middle class is becoming larger, the need for investments in healthcare facilities is present. More investors are planning to set up chains of clinics and hospitals in the country or expanding current facilities to serve a larger and broader segment of patients. Several private equity firms have invested to expand existing private clinic or hospital chains. Over the years several of these groups have increased their clinic number significantly with the help of these private equity investments (for example AAR Healthcare via IFHA, Avenue Group via Abraaj, Nairobi Womens' Hospital via Abraaj and Metropolitan via the Dutch TBL MirrorFund) and there are still new foreign clinic groups entering the market with the help of foreign investments (Taj Medical Centers with the help from an Israeli group). This market is not exhausted yet and there are many opportunities for expansion of existing groups or new investments in general primary care, especially targeting the lower segment of the market, specialized care centres (eye care, dentistry, cancer centers, cardiac centers, paediatric facilities, etc.).

Kenya does not have specialist hospital or clinic architects and constructors. In some cases, medical specialist or an experienced consultant tend to inform the architect and constructor on the design of a hospital or clinic. Specialist knowledge might also be brought in from abroad. In such a case, foreign hospital architects partner with Kenyan architects and constructors given their experienced with permits and locally available building materials. This might pose an opportunity for Dutch expertise on hospital build.

There are several clinics and hospitals with expansion plans. For example in the public sector where KNH has ambitious plans in several areas of their hospital, they are keen to set up a private wing, specialized cancer services. However, one challenge for KNH is funding as the hospital currently has a lot of plans but not sufficient funding to implement these plans.

We have been informed that there are several large Indian hospital groups looking at the Kenyan market to set up their businesses and create economies of scale. This has been reinforced by the Indian Prime Minister visiting the country in July 2016. The Indian government pledged to assist Kenya with the establishment of a modern cancer centre at the KNH. When these and other large investments are materializing in the country this might create an opportunity for linking up the Indians with Dutch expertise in certain areas.

Some of the hospital build projects in the pipeline, that look promising include:

- Kenya Medical Womens' and Children Hospital (Nairobi, 400 bed)
- Africa Medicity (Nairobi - in conjunction with Ruby Clinic from India 600 bed)
- Upgrading and enhancing of Kenyatta University Hospital (Nairobi – 600 bed, Chinese contractors are on site)
- Konza City (Konza-city, designated area for a multi-speciality hospital)
- Clearly defined green field hospital for Tatu City (Tatu City)
- General Hospital (Nairobi, Two Rivers Complex)
- New multi-speciality hospital in Eldoret (Eldoret- public sector).

4.5. Health Financing

Another potential for opportunity for Dutch businesses in Kenya lies in the health financing area, and especially in creating suitable healthcare coverage or universal healthcare coverage for the population.

Although Kenya is a frontrunner in the region in terms of economic and technical developments, the country still only has a prepaid healthcare coverage of about 25%. 75% of the Kenyan population does not have any health (insurance) cover and relies fully on OOP, this huge percentage offers a huge opportunity as the numbers are there and a lot can be won by innovative investments in this area. There are different large international players who are increasingly becoming interested in providing solutions to universal healthcare coverage and entering this sub-market and recently a large Dutch healthcare insurance player showed interest in entering the Kenyan market .

The NHIF is currently being restructured and open for innovations to achieve universal healthcare coverage and to explore innovative ways in providing healthcare coverage for the indigents. Our meeting with *NHIF* showed that any company with a solution and experience in this area is welcome to Kenya and explore ways of partnering. Also the application of appropriate (IT) solutions for better communication and enrolment with its members, as well as improved overall claims management are likely to create opportunities for consulting and business process reengineering (BPR).

The private health insurance sector in Kenya is relatively small and mostly focussed on the rich and upper middle class employed population. There have been initiatives on going to include *health covers especially designed for the lower quintiles of the society and especially the informal working sector* has been targeted in this regard (for example by Britam/Changamka via Linda Jamii). However, a broad successful solution to reach and commit this part of the population has not been found yet. Innovative financing solutions therefore are much needed.

5. Conclusions

Despite efforts and actions of Dutch health organisations in the past, the presence and visibility of Dutch SMEs in Kenya is low, despite the fact that Kenya is relatively accessible compared to other countries in the region. Kenyan healthcare stakeholders seem to be aware of the Dutch Aid & Trade in the past however unaware of the Dutch expertise nor the Dutch health system (managed completion) which performs well according to various international rankings and might serve as an inspiration as opposed to a National Health System (NHS).

Kenya serves as the hub for Eastern Africa (300 million population) and from the country a lot of healthcare business is being done in the neighbouring countries as well. The Kenyan economy has been steadily growing together with the increased demand for quality healthcare by a fast growing Kenyan middle class. The country recognizes the need to scale up its efforts in the healthcare sector towards better quality, greater access and affordability for all Kenyans. The country, in order to substantially optimise healthcare in the country, is very open to smart solutions and has the technologic foundation to build on.

As described in chapter 4, there are opportunities in various fields of healthcare for the Dutch LSH sector: 1) Medical Devices (and supply chain management), 2) eHealth, 3) Training and Education (Human Resource Development for Health), 4) Hospital Build, and 5) Health Financing.

Annex 10 summarises the strengths, weaknesses, opportunities and threats (SWOT) for the Kenyan healthcare market.

Next steps

This market study report marks an important step to further strengthen the bilateral healthcare relation between Kenya and the Netherlands. Task Force Health Care has proposed a roadmap to the Embassy of the Kingdom of the Netherlands to further connect Kenyan with Dutch healthcare stakeholders and build towards sustainable healthcare relationships. Please get in touch with TFHC, KHF, or the EKN Nairobi to be involved.

Literature List

- Deloitte, *Market Assessment of Private Prepaid Health Schemes*
- Episcom Business Intelligence, Kenya Medical Devices Report – Executive Summary
- Government of Kenya (2010), *Constitution of Kenya,* Fourth Schedule
- University of Washington and Action Aid Africa, *Strengthening the local production of essential generic drugs in the least developed and developing countries Kenya, Assessing Facility Capacity, Costs of Care, and Patient Perspectives, Institute for Health and Evaluation*, ,
- Kenya Institute for Public Policy Research and Analysis (KIPPRA) (2012). *Kenya Economic Report 2012*
- Kenya Medical Supplies Agency (KEMSA), *A case study of the ongoing transition from an ungainly bureaucracy to a competitive and customer focused medical logistics organization – a study for the World Bank*
- Kenya Medical Supplies Agency (KEMSA) (2008), P*rocurement Review, 1 January – 31 December 2007-Final Report*
- Kipaseyia, John Saitoi (2016), *Factors influencing membership uptake of National Hospital Insurance Fund among the poor: a pastoralist' perspective*
- Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID) (2013), *Exploring Kenya's Inequality*
- KPMG (2013), *The Devolution of Health Services in Kenya*
- Ministry of Health, *Health Sector Strategic and Investment Plan July 2014- June 2018*
- UNIDO (2010), *Pharmaceutical Sector Profile: Kenya*
- Vaishalee Patel, Clinical Trials in Kenya, SOMO, May 2016.
- Ministry of Health*, Health Tourism Strategy 2013-2030*
- Ministry of Health, *Kenya National e-Health Strategy 2011-2017*
- Ministry of Health, Kenya Health Systems Assessment *2010*
- Ministry of Health, *Kenya Health Policy 2014-2030*
- Ministry of Health, *National and County Health Budget Analysis Report 2014/2015*
- Ministry of Health, *National Health Accounts 2012/13*
- Odero, Walter O., Wilmot A. Reeves and Nicholas Kipyego, Kenya *2015 – African Economic Outlook*, AfDB, OECD and UNDP, 2015.
- World Bank Group , Findings from Household Surveys on Migration and Remittances, Sonia Plaza (The World Bank), Global Remittances Working Group, April, 2012.
- World Bank Group, Laying The Foundation For A Robust Health Care System In Kenya: Kenya Public Expenditure Review VOL II, December 2014
- World Bank Group, World Bank Working Paper No 193, Private Health Sector Assessment in Kenya
- World Health Organization (WHO), *WHO Global Health Expenditure Database 2010*
- World Health Organization (WHO), *Kenya: WHO Statistical Profile*, last updated version January 2015
- World Health Organization (WHO): *Kenya Statistical Profile, data for the year 2013.*

Website references:

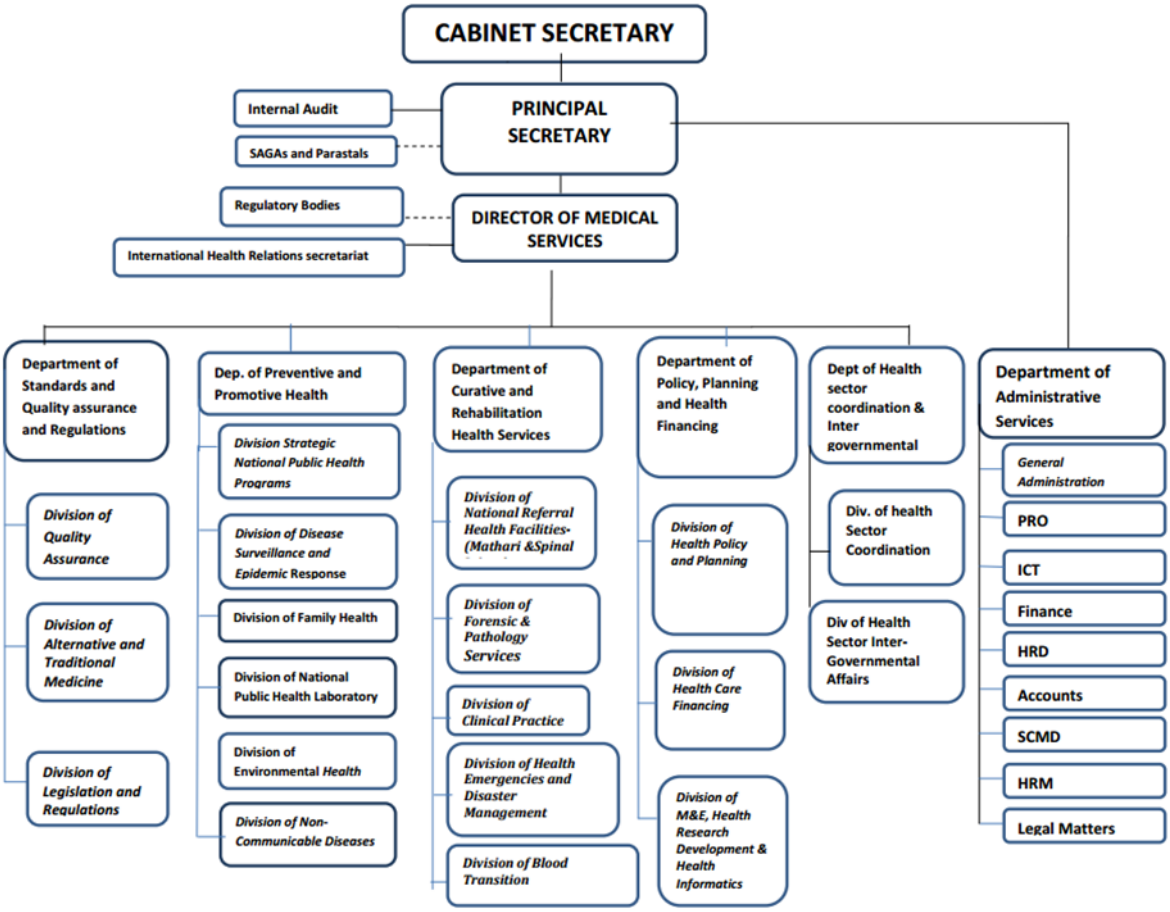
- http://www.ey.com/GL/en/Services/Tax/International-Tax/Alert--Kenya-enacts-Special-Economic-Zones-Act-2015, d.d. 9 August 2016
- http://www.industrialization.go.ke/index.php/media-center/blog/310-kenya-to-roll-out-special-economic-zones-in-first-quarter-of-2016, d.d. 9 August 2016
- http://atlas.media.mit.edu/en/visualize/tree_map/hs92/import/ken/nld/show/2014/, d.d. 9 August 2016
- http://kmlttb.org/, d.d. 26 April 2016.
- http://www.kndi.institute/about-us/index.html, d.d 26 April 2016.
- http://photc.org/about-us/, d.d 26 April 2016
- http://www.rpbkenya.org/about_us.html, d.d. 26 April 2016.
- http://hifund.org/index.php?page=health-plans-in-kenya, d.d. 27 June 2016 .
- http://nckenya.com/about-us/, d.d. 26 April 2016.
- http://medicalboard.co.ke/
- http://pharmacyboardkenya.org/, d.d. 26 April 2016.

- http://www.ca.go.ke/index.php/what-we-do/94-news/366-kenya-s-mobile-penetration-hits-88-per-cent, d.d. 27 June 2016.
- https://www.techchange.org/2014/11/03/mhealth-challenges-opportunities-kenya-india/, d.d. 27 June 2016.
- https://www.techchange.org/2014/11/03/mhealth-challenges-opportunities-kenya-india/, d.d 27 June 2016.
- http://www.businessdailyafrica.com/Corporate-News/Only-44-per-cent-of-Kenya-s-e-health-technologies-thrive/-/539550/2359450/-/ksp67tz/-/index.html, d.d. 27 June 2016.
- http://amref.org/info-hub/capacity-building/basic-and-post--basic-training/, d.d. 9 August 2016
- http://www.prweb.com/releases/2018-medical-devices/industry-analysis/prweb11250870.htm, p.p. 24 May 2016
- http://www.vision2030.go.ke/index.php/about-vision2030/, d.d. 25 May 2016.
- http://www.kccb.or.ke/home/commission/12-catholic-health-commission-of-kenya/, d.d. 29 April 2016.
- http://www.health.go.ke/?p=1658, d.d. 8 August 2016/
- http://smartglobalhealth.org/parges/kenya-mission/kenya-health, d.d. 21 March 2016
- http://kmhfl.health.go.ke/: Master Facility List visited on 8th August 2016.
- http://www.knbs.or.ke/index.php?option=com_content&view=article&id=151:ethnic-affiliation&catid=112&Itemid=638, d.d. 8 August 2016.
- https://en.wikipedia.org/wiki/List_of_countries_by_life_expectancy, d.d 13 June 2016.
- http://www.worldlifeexpectancy.com/country-health-profile/kenya, d.d. 14 June 2016.
- http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_uganda.pdf,d.d. 18 May 2016.
- http://data.worldbank.org/indicator/SH.DYN.MORT, d.d. 8 August 2016
- http://www.worldbank.org/en/country/kenya/overview, d.d. 17 March 2016.
- http://www.who.int/countries/ken/en/, d.d. 8 August 2016.
- http://www.africa.upenn.edu/NEH/kgeography.htm, d.d. 18 May 2016.
- http://www.geocurrents.info/geonotes/intense-ethnic-divisions-in-the-2013-kenyan-election, d.d. 18 May 2016.
- http://data.worldbank.org/indicator/SP.RUR.TOTL.ZS, d.d. 17 March 2016 May
- http://www.who.int/countries/ken/en/, d.d. 8 August 2016.
- http://www.akilah.net/news-trends/kenyas-middle-class-is-growing-how-you-can-cash-in/, d.d. 8 August 2016.
- http://www.health.go.ke/?p=1658, d.d. 8 August 2016
- https://www.devfinance.net/mobile-payments-enable-access-to-healthcare-in-kenya/, d.d. 27 June 2016.

Annex 1: List of contacts during fact-finding visit Kenya

	Name	Organization
1	Dr. Pacifica Onyancha	Ministry of Health, Director Quality and Accreditation
2	Dr. Amit N. Thakker	Kenya Healthcare Federation
3	Dr. Anil Shah	Medanta/Africare
4	Dr. Isaac Nzyoka	UAP
5	Mr. Daniel Mulinge	National Hospital Insurance Fund
6	Dr. Charles. Kariuki	AAR Healthcare
7	Dr. Fred Moin Siyoi	Pharmacy and Poisons Board
8	Dr. Evanson Kamuri	Kenyatta National Hospital
9	Mr. Rupen Haria	Harleys Limited
10	Mr.Vijai Maini	Surgipharm Limited
11	Dr. Andrew Mulwa	Chair of County Executive Committee
12	Dr. Julliet Gikonyo	Karen Hospital
13	Mr. Roelof Assies	Philips
	eHealth Roundtable	
14	Mr. Yavnik Gelnic	SevenSeas Technologies
15	Dr. Stephen Wanjee	Kenya Health Information Association
16	Dr. Cathy Mwangi	mHealth
17	Dr. Willis Akhwale	ITech
18	Dr. Onesmus Kamau	Ministry of Health – eHealth Department
	Dutch Partners Roundtable	
19	Mrs. Millicent Olulo	PharmAccess Foundation
20		Amref Health Africa
21	Mr. Poovasen Chetty	Philips
	Health Infrastructure Roundtable	
22	Mr. Oscar Ogunde	Symbion
23	Mr. Jaspal Singh	Sketch Studio
24	Mr. Arvind Patel	Kilimanjaro Contractors

Annex 2: Ministry of Health: Organizational Structure

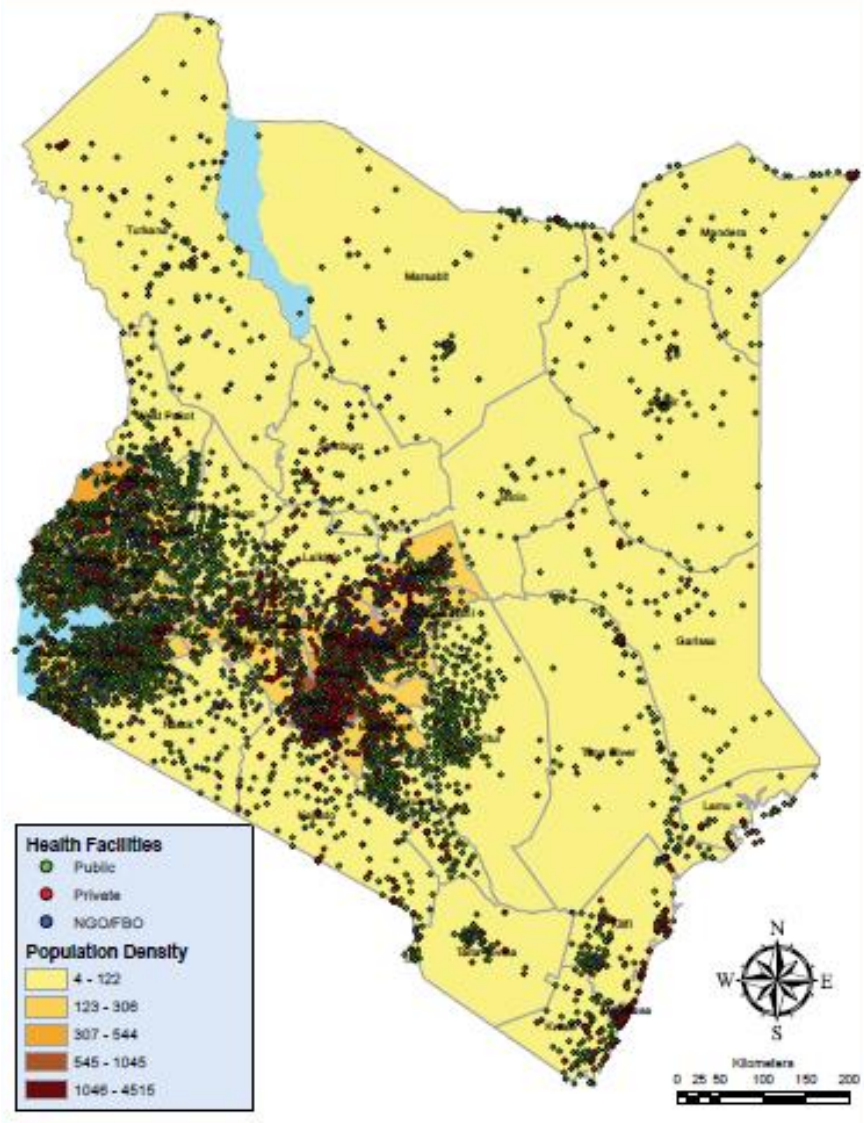


Annex 3: Current Status of Health Infrastructure in Kenya[107]

Area	Current status
Physical Infrastructure	- Significant ongoing projects, focusing on establishment of 2012 model health centres and expansion of hospital infrastructure in 80 hospitals - Many primary care facilities not offering comprehensive package of primary care services - Facility investments not matched with other investments (HRH, commodities etc. leading affecting functionality after completion of investments - Limited investment in maintenance of physical infrastructure – ongoing supervision
Communication and ICT equipment	- ICT equipment supplied to all public/FBO facilities - Communication equipment (telephones) available in all hospitals - Radio equipment provided to all facilities in Arid/Semi-Arid areas of the Country - Limited investment in maintenance of communication equipment
Medical equipment	- Investments in medical equipment ongoing in selected hospitals - Lack of comprehensive, coordinated investment, with gaps in some facilities still existent - Limited investment in maintenance of medical equipment
Transport	- Purchase of ambulances ongoing, at hospital and model Health Centres - Still significant gaps in utility vehicle availability (some ambulances also used as utility vehicles as result) - MOH undertaking some measures to enhance transport possibilities in the sector such as: outsourcing of certain activities to the private sector, e.g. courier companies to collect/deliver stocks/specimens, taxi companies for referral in very rural areas with appropriate reimbursement and ambulances for bigger hospitals. - Limited maintenance investment

[107] Kenya Health Sector Strategic and Investment Plan 2013-2017, The Second Medium Term Plan for Health, p. 46-47.

Annex 4: Map of Healthcare Facilities in Kenya[108]



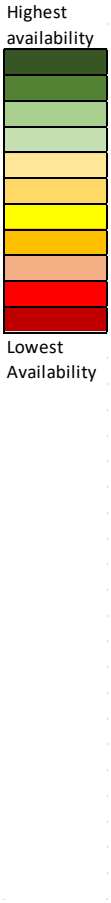
[108] PER Health Report, p.5

Annex 5: Average Availability of Health Services per Facility

Please note that even though the National Referral Hospitals score "GREEN" for many service offerings, one has to note that there are only 2 National Referral Hospitals in the country and that the capacity, due to lack of sufficient specialized equipment and qualified HR specialists, is very limited and patients are often not being treated due to these constrains. It is therefore that patients who are able, often will go for specialized treatments to the private sector or travel abroad.

Average availability of health services per facility type[109]

	National Provincial Hospital	District/ Sub-district Hospital	Private Hospital	Maternity Home	Public Health Center	Private Health Center	Public Dispensary	Private Dispensary /Clinic
Pharmacy	100	100	100	94	100	100	92	88
Immunization program	91	100	100	88	97	93	88	65
Antenatal care	100	100	100	94	97	80	81	65
Routine delivery services	100	100	100	94	87	67	54	42
HIV/AIDS care	100	100	88	47	95	73	77	50
Pediatric	91	96	88	76	74	60	77	65
Surgery, general	100	85	88	71	45	47	38	27
Emergency obstetric care	100	74	82	53	53	33	27	35
Medical Ward	100	85	88	76	39	47	0	8
Nutrition	100	74	71	12	76	33	42	31
Internal Medicine	91	52	59	29	45	73	31	50
Famiy Planning	73	63	53	29	68	47	58	8
Pediatric Ward	91	67	82	59	26	33	0	4
Health education outreach	55	44	41	12	61	53	42	12
Accident and emergency unit	91	41	59	29	21	42	15	23
Obstetric ward	91	56	76	35	29	20	0	8
Outreach services	64	33	47	12	61	53	38	4
Laboratory	100	48	76	24	18	13	0	8
Tuberculosis and other respiratory diseases	82	52	59	29	29	20	0	4
Anesthesiology	100	30	65	35	0	0	4	8
Diagnostic/medical imaging	100	37	65	18	5	7	0	8
Surgical ward	91	30	76	35	0	7	0	0
Eye care	91	37	47	6	13	7	4	19
Newborn nursery	91	37	47	18	5	13	0	8
Physical therapy and rehabilitation	100	44	47	12	0	0	0	0
Dentistry	91	48	35	18	3	0	0	8
Occupational Therapy	91	48	29	6	8	0	0	0
Morgue	91	33	41	6	0	7	0	0
Orthopedic	91	33	29	0	3	7	0	0
Surgery, orthopedic	91	22	35	12	0	0	0	0
Blood donor center	91	19	18	6	0	0	0	0
Psychiatric	73	26	18	6	0	0	0	4
Chemotherapy	64	4	18	0	0	0	0	4
Surgery, cardiovascular	55	4	24	0	0	0	0	0
Surgery, neurological	55	4	18	0	0	0	0	0



[109] Health Service Provision in Kenya, Assessing Facility Capacity, Costs of Care, and Patient Perspectives, Institute for Health and Evaluation, University of Washington, Action Africa Help International, p27.

Annex 6: List of Largest Medical Equipment Distributors in Kenya

	Organization	Website	Main product lines
1	**Kenya Medical Suppliers Authority (KEMSA)**	www.kemsa.co.ke	
2	**Mission for Essential Drugs & Supplies (MEDS)**	www.meds.or.ke	
3	**Harleys**	www.harleysltd.com	OTC products, Pharmaceutical Products, Medical equipment, Surgical Instrument, Ophthalmic.
4	**Surgipharm Limited**	info@surgipharm.com	Pharmaceuticals-Manufacturers, Agents & Distributors
5	**Medipharm East Africa LTD**	www.medipharm.co.ke	Lab equipment, Pharmaceuticals products and Medical Products
6	**Meditec Systems Limited, Kenya:**	www.meditecsystems.net	Radiology, Cardiology and Angiography, Oncology, diagnostic solutions, Ventilators and refurbished products
7	**Bio-zeq Kenya Limited**	biozeqkenya.com	Lab Consumables, Hospital Equipment, Agricultural research equipment, Animals and veterinary molecular testing.
8	**Pulse Medics Equipment LTD Kenya**	www.pulsemedic.com	Diagnostic equipments, Home care products, surgical instruments and disposables, Mecical gases and piping, ICU equipments, oxygen equipment, operating theatre equipments.
9	**Crown Healthcare LTD**	www.crownkenya.com	Basic Medical equipments, hospital furniture, Radiology, Renal solutions, Laboratory equipments, Surgicals, Lab consumables and theatre equipment.
10	**Omaera Pharmaceuticals Limited**	www.omaera.com/	Diagnostic reagents, laboratory chemicals, laboratory equipments, medical devices, human medicines, surgical dressings and surgical instruments.
11	**Bobcare Medical System Ltd**	www.bobcaremedical.com	Laboratoy equipments, ICU Equipment, Maternity equipment, SURGICAL INSTRUMENTS, LAUNDRY AND CATERING EQUIPMENT, BOILER, WATER AND PLANTS INSTALLATION
12	**Apple Pharmaceuticals Ltd**	ruppharm@kbo.co.ke	Lab equipment, Pharmaceuticals products and Medical Products
13	**CENTRIC MEDICAL SOLUTIONS**	www.centricmedicalsolutions.com	Hospital, Medical, Laboratory, Glass wares, Diagnostics, Biomedical, Dental, Scientific, Research Instruments & Equipments.
14	**Blekam (EA) Ltd**	blekamlabkits.kbo.co.ke	Lab equipment, Pharmaceuticals products and Medical Products
15	**Scitech Diagnostics Ltd**	www.scitechdiagnostics.com	Reagents, Lab Equipment, Molecular Biology, Clinical Chemistry, Immunology, Hematology.
16	**MECK SUPPLIES (K) LTD**	mecksupplies.kbo.co.ke	Medical equipments,surgical equipments,laboratory equipments
17	**Ashcott Ltd**	www.ashcott.com	equipment for CSSD, Operating Theatre, maternity, Neonatology, Cardiology , Perinatal, ward equipment.
18	**Seropharm East Africa Ltd**	seropharm@wananchi.com	Radiology, Cardiology and Angiography, Oncology, diagnostic solutions, Ventilators and refurbished products
19	**Chemoquip Ltd.**	www.chemoquip.com	Haematology, Glasware, filtration systems, microscopes, water distils.
20	**Hass Scientific & Medical Supplies Ltd**	www.hasscientific.com	Lab Consumables, Hospital Equipment, Agricultural research equipment, Animals and veterinary molecular testing.

Annex 7: Public Procurement Process

Public procurement is governed by the Public Procurement and Disposal Act (CAP 412C). This Act provides General Principles of Procurement and Disposal as follows:

- The Act provides for the General Principles of Procurement and Disposal in Section 53 as follows:
- All procurement entities shall develop annual procurement plans which shall be guided or underpinned on approved budgets;
- All procurements shall designate/reserve at least 30 per cent to women youth and People with Disabilities;
- No procurement shall be commenced unless there is ascertained sufficient cash flow to carry through the process to conclusion which includes settlement of supplier invoices;
- Any state or public officer who fails to prepare procurement and disposal plans shall be subject to internal disciplinary action among other principles.

A person is eligible to bid for a contract in procurement or an asset being disposed, only if the person satisfies the following criteria:

i. The person has the legal capacity to enter into a contract for procurement or asset disposal;
ii. The person is not insolvent, in receivership, bankrupt or in the process of being wound up;
iii. The person, if a member of a regulated profession, has satisfied all the professional requirements;
iv. The procuring entity is not precluded from entering into the contract with the person;
v. The person and his or her subcontractor, if any, is not debarred from participating in procurement proceedings under Part XI of the Act;
vi. The person has fulfilled tax obligations;
vii. The person has not been convicted of corrupt or fraudulent practices; and
viii. Is not guilty of any serious violation of fair employment laws and practices.

A person or consortium shall be considered ineligible to bid, where in case of a corporation, private company, partnership or other body, the person or consortium, their spouse, child or subcontractor has substantial or controlling interest and is found to be in contravention of the criteria 5 above.

Despite this, a person or other body having a substantial or controlling interest shall be eligible to bid where such person has declared any conflict of interest; and performance and price competition for that good, work or service is not available or can only be sourced from that person or consortium.

Parties are invited for government hospital projects to respond to tenders. The only reason why they invited us was to respond on paper. When you are responding you are just there to fulfil someone's dream. They have already decided long time ago who will get the project. It was mentioned that the situation at government level is getting worse. Even to the point that a contractor will not opt for any public projects anymore.

On Preference and Reservation in Part XII of the Act, Sections 155 to 158 of the Act, this shall be subject to availability and realization of the applicable international or local standards. Preference and Reservation shall be applied:

i. Only such manufactured articles, materials or supplies wholly mined and produced in Kenya shall be subject to preferential procurement.

ii. Manufactured articles, materials and supplies partially mined or produced in Kenya or where applicable have been assembled in Kenya; or
iii. Firms where Kenyans are shareholders holding over 51% of shares. Where a procuring entity seeks to procure items not wholly or partially manufactured in Kenya
iv. The accounting officer shall cause a report to be prepared detailing evidence of inability to procure manufactured articles, materials and supplies wholly mined or produced in Kenya; and
v. The procuring entity shall require successful bidders to cause technological transfer or create employment opportunities as shall be prescribed in the Regulations.

All government tenders are posted on this site:

http://supplier.treasury.go.ke/site/tenders.go/index.php/public/tenders

Past tenders, pricing, awards and details on items and quantities can also be accessed from the same site.

Annex 8: Medical Training Institutions in Kenya

	Training Institutions
	FBO and Private Sector
1	AIC KAPSOWAR SCHOOL OF NURSING
2	AIC KIJABE
3	AIC LITEIN
4	AMREF SCHOOL OF NURSING
5	AMREF VIRTUAL SCHOOL
6	CICELY MCDONELL SCHOOL OF NURSING - NAIROBI HOSPITAL
7	CLIVE IRVINE COLLEGE, CHOGORIA
8	CONSOLATA SCHOOL OF NURSING – NKUBU
9	CONSOLATA SCHOOL OF NURSING – WAMBA
10	CONSOLATA SCHOOL OF NURSING NYERI
11	FIDENZIA SCHOOL OF NURSING
12	GETRUDES SCHOOL OF NURSING
13	GREAT LAKES UNIVERSITY
14	KABARAK UNIVERSITY
15	KENDU ADVENTIST MEDICAL COLLEGE
16	KENYA METHODIST UNIVERSITY
17	MASENO MISSION HOSPITAL AND SCHOOL OF NURSING
18	CATHERINE MCAULEY SCHOOL OF NURSING AND MIDWIFERY - MATER HOSPITAL
19	MATIBABU FOUNDATION COLLEGE OF HEALTH SCIENCES
20	MAUA MEDICAL HOSPITAL SCHOOL OF NURSING
21	MOUNT KENYA UNIVERSITY
22	MOUNT KENYA UNIVERSITY- LODWAR CAMPUS
23	NAIROBI WOMEN'S NURSING SCHOOL
24	NAZARETH MEDICAL COLLEGE
25	NORTH COAST MEDICAL TRAINING COLLEGE – KILIFI
26	ORTUM MISSION SCHOOL
27	OUR LADY OF LOURDES MWEA SCHOOL OF NURSING
28	OUTSPAN MEDICAL COLLEGE
29	PCEA NAKURU WEST
30	PCEA TUMU TUMU MISSION SCHOOL OF NURSING
31	PCEA-CHOGORIA
32	PRESBYTERIAN UNIVERSITY OF EAST AFRICA
33	RAM MEDICAL TRAINING COLLEGE
34	ST MARY'S SCHOOL OF NURSING – MUMIAS
35	ST. CAMILLUS SCHOOL OF NURSING – TABAKA
36	ST. CLARES KAPLONG NURSING SCHOOL
37	ST. ELIZABETH MUKUMU
38	ST. JOSEPH'S H. KILGORIS

39	ST. LUKES HOSPITAL KALOLENI
40	ST. LUKES KINANGOP
41	ST. MARY'S MEDICAL COLLEGE GILGIL
42	ST. MARY'S MEDICAL COLLEGE MUMIAS
43	ST.JOSEPH'S SCHOOL OF NURSING - MIGORI
44	ST.JOSEPH'S MEDICAL COLLEGE - NYABONDO
45	TENWEK SCHOOL OF NURSING
46	TRACOM COLLEGE NAKURU
47	WAMBA MISSION
	Kenya Medical Training Colleges – Public Sector
1	KMTC – BOMET
2	KMTC – BONDO
3	KMTC – BUNGOMA
4	KMTC – CHUKA
5	KMTC – CHWELE
6	KMTC – ELDORET
7	KMTC – EMBU
8	KMTC – GARISSA
9	KMTC – GATUNDU
10	KMTC - HOMA BAY
11	KMTC – ITEN
12	KMTC – KABARNET
13	KMTC – KAKAMEGA
14	KMTC – KAPENGURIA
15	KMTC – KAPKATETI
16	KMTC – KAPTUMO
17	KMTC – KAREN
18	KMTC – KARURI
19	KMTC – KILIFI
20	KMTC – KISII
21	KMTC – KISUMU
22	KMTC – KITALE
23	KMTC – KITUI
24	KMTC – KURIA
25	KMTC – KWALE
26	KMTC - LAKE VICTORIA
27	KMTC – LODWAR
28	KMTC – LOITOKITOK
29	KMTC – MACHAKOS
30	KMTC – MAKINDU
31	KMTC – MAKUENI
32	KMTC – MANZA
33	KMTC – MATHARE

34	KMTC – MERU
35	KMTC – MIGORI
36	KMTC – MOMBASA
37	KMTC – MOSORIOT
38	KMTC – MSAMBWENI
39	KMTC - MURANG'A
40	KMTC – MWINGI
41	KMTC – NAIROBI
42	KMTC – NAKURU
43	KMTC – NYAMIRA
44	KMTC – NYANDARUA
45	KMTC – NYERI
46	KMTC - PORT REITZ
47	KMTC – RERA
48	KMTC – SIAYA
49	KMTC – THIKA
50	KMTC – VIHIGA
51	KMTC – WEBUYE
	Other Public Medical Training Institutions
1	ARMED FORCES-TRAINING SCHOOL AND HOSPITAL
2	EGERTON UNIVERSITY
3	KABIANGA UNIVERSITY
4	KENYA INSTITUTE OF PUBLIC HEALTH – THIKA
5	KENYATTA NATIONAL HOSPITAL SCHOOL OF NURSING
6	KISII UNIVERSITY
7	MOI TEACHING AND REFERRAL HOSPITAL
8	NORTH EASTERN PROVINCE(NEP) COLLEGE OF HEALTH SCIENCES
9	NYERI TECHNICAL TRAINING INSTITUTE
10	RIFT VALLEY TECHNICAL INSTITUTE – ELDORET
11	RIFT VALLEY TECHNICAL INSTITUTE – NAKURU
12	TECHNICAL UNIVERSITY OF KENYA
13	TECHNICAL UNIVERSITY OF MOMBASA

Annex 9: List of Largest Healthcare Providers in Kenya

Organization	Email	Website	Address	Bed Capacity	Services
Kenyatta National Hospital (KNH)	knhadmin @knh.or.ke	www.knh.or.ke	P. O. Box 20723 - 00202 Nairobi.	2000	
Moi Teaching and Referral		-	Eldoret, in the Rift Valley Province	800	
The Nairobi Hospital	hosp@nairobihospital.org	www.nairobihospital.org	The Nairobi Hospital Argwings Kodhek Rd P.O. Box 30026 G.P.O 00100 Nairobi, Kenya	355	Casualty accident and emergency centre, Family Health, Diabetes Clinic, Antenatal Clinic, Chest Clinic,Breast Health Clinic, Child Welfare or Well Baby Clinic,Travel and Immunization Clinic,Chemotherapy,Gynaecology / Postnatal / Family Planning Clinic etc.
Aga Khan University Hospital (AKUH)	contact-us@aku.edu	www.hospitals.aku.edu/nairobi/	3rd Parklands Avenue off Limuru Road,Box 30270-00100 Nairobi, Kenya	280	Accident & Emergency, Dental Dietetic Services, Family Medicine, Pediatrics,Pharmacy, Physiotherapy & Rehabilitation, Radiology, Surgery Women's Services (Obstetrics & Gynaecology)
MP Shah Hospital	info@mpshahhosp.org	www.mpshahhosp.org	Shivachi Road, Nairobi, Kenya. P.O. box 14497, 00800 Nairobi, Kenya	306	outpatient services, inpatient services, Medical & Diagnostic facilities, cancer care centre
Avenue Hospital.	homecare @avenuehealthcare.com	www.theavenuehospital.com	Ojijo Road, Parklands next to Mobil Petrol Station	113	24 hour Outpatient Department - General Medical and Surgical wards - Paediatric ward - A secure and self-contained Psychiatric ward - Maternity ward with nursery - HDU - Private rooms - Operating theatres for major and minor surgery - X-ray and ultrasound services - Ambulance and patient transport services - Pharmacy & Clinical laboratory services - A refrigerated mortuary
The Matter Hospital	inform@materkenya.com	http://www.materkenya.com	,Along Mukenia & Dunga Road, South B. P. O. Box 30325- 00100 Nairobi Kenya	137	ACCIDENT AND EMERGENCY, CONSULTANCY, DENTAL, IMMUNISATION, WELL PERSONS CLINIC, OUTPATIENT MATERNITY SERVICES AND LAMAZE CLASSES, COMPREHENSIVE CARE CLINIC, OPERATING THEATRES, INTENSIVE CARE UNIT, WARDS.

Karen Hospital	info@karenhospital.org	www.karenhospital.org	Karen Hospital - Langata	103	Emergency and critical care, acute medical and surgical services, diagnostics, rehabilitation, mental health, palliative care, undertaking research and educating the next generation of healthcare professionals.
Guru Nanak Hospital	marketing@gnrsh.co.ke/ admin@gnrsh.co.ke	www.gnrsh.com	Murang'a Road, P.O. BOX 33071, Nairobi 00600 Telephone: 254 20 6763481 Mobile: 0722 303884	45	Accidents/Emergencies, Outpatient services, In-patient services, Laboratory services, X-Ray and Ultra Sound services, Mobile X-Ray unit, Physiotherapy department, Maternity unit, Maternal child health services, Full equipped theatre and day surgery setup, Pharmacy, Ultra-modern dental unit, Ambulance services, HIV/AIDS counselling, VCT/DCT
Getrudes Children's Hospital	info@gerties.org	www.gerties.org	MUTHAIGA ROAD, P.O Box 42325 - 00100 Nairobi; KENYA TEL: 0722 898 948 / 0733 639 444	103	Emergency Department,Pharmacy Services, Laboratory Services, Wards & Facilities, Pediatric Nurses, Phlebotomists, Laboratory Technologists, Examination Room,Operating Theatres,Neurosurgery,Ophthalmology etc

Annex 10: SWOT Analysis of the Kenyan Healthcare Sector

Strengths	Weaknesses
• Openness for innovative concepts and a testbed for the region. • Ease of doing business: business culture, easy access for SMEs compared to region, English, daily direct flights from Amsterdam, trade surplus with the Netherlands. • Business hub for East Africa.	• Funding in public sector. Donor-oriented. • Healthcare in Kenya expensive due to high salaries, leading to an outflow of patients (reimbursed by insurers). • Counterfeit medicine. • Low integrity of the public procurement processes.
Opportunities	**Threats**
• Intention to optimise healthcare. Changing mindset on macro level taken into account local context (with help of experienced Dutch). • Priority on 'capacity building' through telemedicine, training, infrastructure, mobile health. • Unaware of Dutch expertise / possibilities (nor the Dutch Health System as inspiration as opposed to NHS). • Presence of various Dutch expertise: funding (IFHA), Health Financing; Quality & Standards (PharmAccess), Medical Devices & E-Health (Philips), Community Involvement (AMREF), Netherlands Business Support Hub. • High volume, low cost healthcare delivery from India. • Fast growing private healthcare sector with budgets for branded equipment. • Low health coverage (although frontrunner in the region). • Devolution: get involved in county's efforts to strengthen health locally. • Netherlands (did) invest(s) in Health (Oret, CBI, IFHA, DGGF, etc.); build on experiences. • Enormous outflow of patients; incentive for more attractive local healthcare. • Need for expertise of clinical trials.	• Established and increasing competition.

Annex 11: Doing Business Index Kenya (World Bank)

Topics	DB 2016 Rank	DB 2015 Rank	Change in Rank
Starting a Business	151	148	↓ -3
Dealing with Construction permits	149	152	↑ +3
Getting Electricity	127	141	↑ +14
Registering Property	115	121	↑ +6
Getting Credit	28	118	↑+90
Protecting Minority Investors	115	114	↓ -1
Paying Taxes	101	99	↓ -2
Trading Across Borders	131	131	No change
Enforcing Contracts	102	102	No change
Resolving Insolvency	144	145	↑ +1

Annex 12: List of Trade Fairs and Conferences

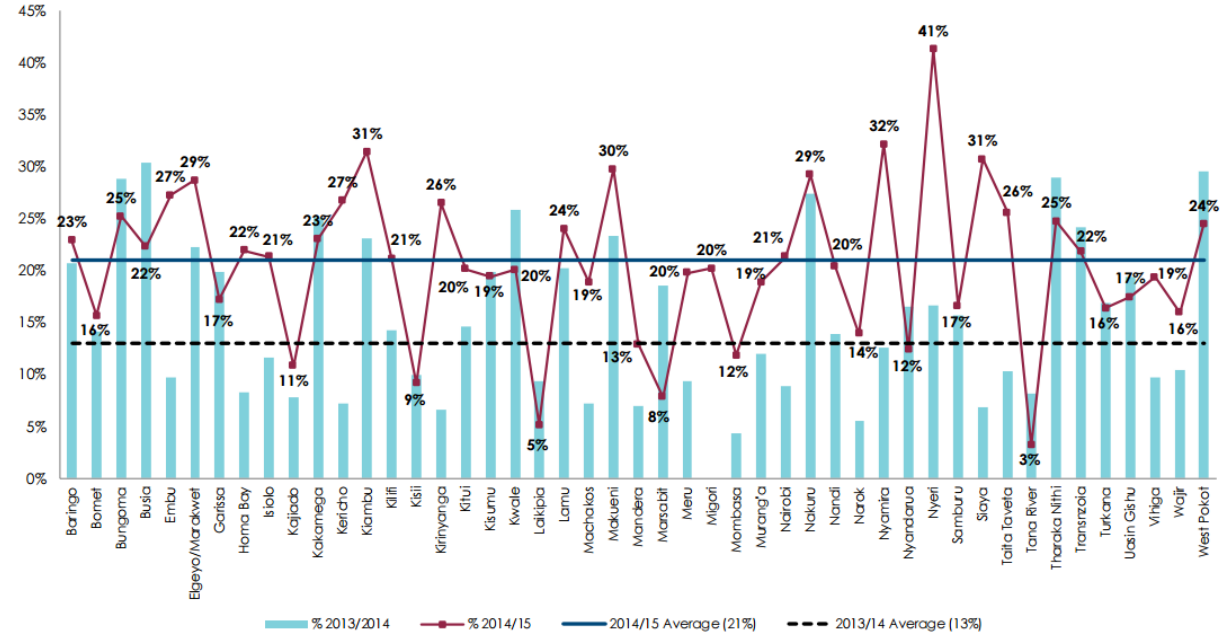
Name	Dates and Venue	Type of engagement	Website/Contact
Mediq East Africa	27-29 September 2016, Oshwal Centre, Nairobi	The largest exhibition fair of East Africa where manufacturers and distributors can meet.	www.mediceastafrica.com
Africa Health Business Symposium (AHBS)	6-7 October 2016, Safari Park Hotel, Nairobi	The AHBS 2016 is derived from the very successful EAHF Conferences and is the first pan African health business platform that will bring together key leaders in the health sector (public and private sector). The event will have a conference program which rich content and have exhibition space outside the main conference hall.	www.africahealthbusiness.com Marloes Kibacha: mkibacha@africahealthbusiness.com
East Africa Healthcare Federation (EAHF) Conference	TBA, Dar es Salaam - Tanzania	The EAHF 2016 was recently (June) concluded in Kampala, Uganda. The EAHF is the EA private health sector federation of which the national EA federations are members. The EAHF organizes an annual event for its members and stakeholders interested in the (private) health sector in the region.	www.eahf.net Marloes Kibacha: mkibacha@khf.co.ke
Medexpo			
EA Health and Scientific Conference		Organized by the Ministries of Health of the EAC.	

Annex 13: Examples of Projects & Investments with Dutch involvement

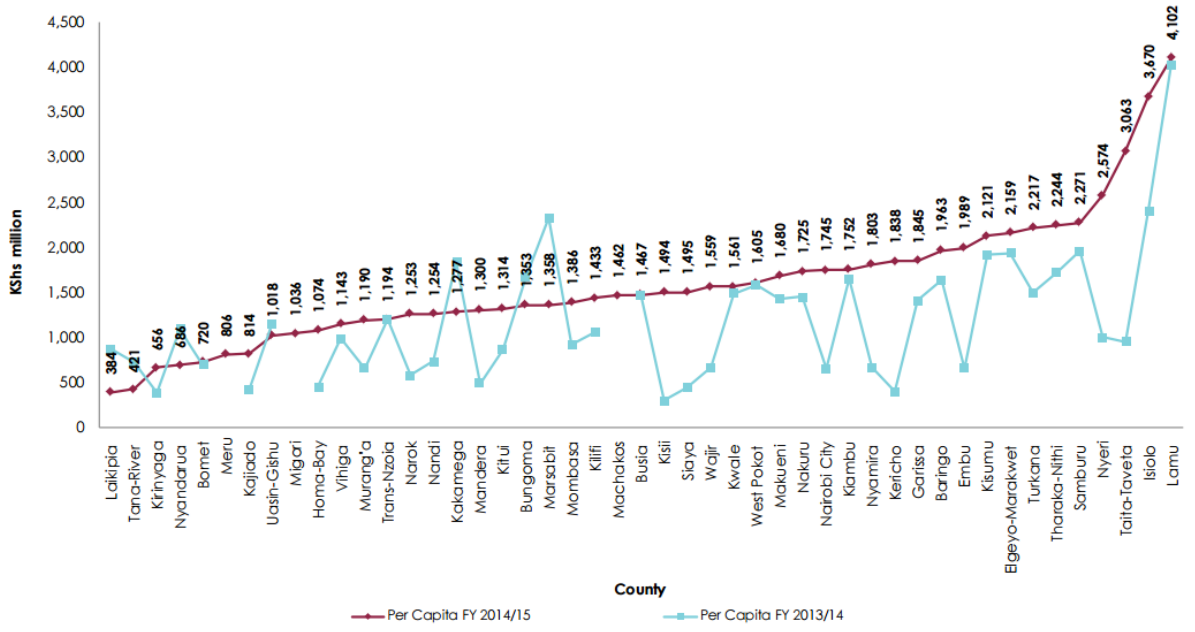
Project title	Start	Involved organisations	Description	More information
ORETK00091 "Strengthening of 6 Provincial Hospitals and 17 Adherent District Hospitals in Kenya"		Kenyan Ministry of Health, Simed International, Philips.	The project involved rehabilitation of the 6 provincial hospitals and 17 District Hospitals in Western, Central and Eastern Kenya. The project included, provision of equipment, maintenance and technical assistance.	
ORIO10KE01 "Reinforcement of the Health Infrastructure in Northern Kenya."	2010	Kenyan Ministry of Health, AMPC, Philips.	The project is defined as the rehabilitation of 13 district and provincial hospitals in the Northern and Eastern region of Kenya. The project includes (re-)construction, provision of equipment, maintenance and technical assistance.	Click here.
Investment Funds for Health in Africa (IFHA)	2008 (I) 2010 (II)	International Finance Corporation (IFC), European Investment Bank (EIB), Netherlands Development Finance Organization (FMO), Dutch Good Growth Fund (DGGF), ACHMEA and others	The Investment Funds for Health in Africa (IFHA) are private equity funds dedicated to small to medium size (equity) investments in private healthcare companies in Africa. Current portfolio includes AAR Healthcare operating in Kenya, Uganda and Tanzania.	Click here.
FDOV Healthy Business Development Programme	2014	Kenyan Ministry of Health, Strathmore Business School, AMPC, Medical Credit Fund, IFC Health in Africa Initiative	Under the 'Facility for Sustainable Entrepreneurship and Food Security' (FDOV) of the Dutch Ministry of Foreign Affairs, the 'Healthy Business Development Programme' provides a service offering to healthcare SMEs that helps strengthen their business.	Click here.
Philips Research & Innovation Hub	2014	Philips	The Philips Africa Research & Innovation Hub will do application-focused scientific and user studies to address key challenges like improving access to lighting and affordable healthcare as well as developing innovations to meet the aspirational needs of the rising middle class in Africa.	Click here.
Life Community Centers	2014	Philips	Community Life Centers provide vital primary care but also goes beyond by turning health facilities into a community hubs where technology is bundled with services.	Click here.
M-Hakika	2016	AMREF, PharmAccess	The project makes money and quality healthcare accessible to women in Kenya directly via their mobile phone and combines healthcare knowledge, quality and financing, all through the mobile telephone.	Click here.

Annex 14: County Budget Allocations[110]

County Health Budget Allocation as a Percentage of Total County Budget by County
FYs 2013/14–2014/15



Per capita Health Budget Allocations (KShs millions) by County
FYs 2013/14 and 2014/15



[110] Ministry of Health, 2014/2015 National and County Health Budget Analysis Report

Annex 15: Requirements and benefits of SEZ license.[111]

Application for a SEZ License

A person intending to carry on business as SEZ developer, operator or enterprise shall apply to the Authority for an appropriate license. Such a license may be issued by the Authority on recommendation of the Commissioner of Customs and payment of the prescribed fee within 30 days of receiving the application together with the relevant supporting documents.

To qualify for an SEZ license, the applicant must be, in addition to such other criteria and requirements as may be prescribed:

- Be a company incorporated in Kenya for the purpose of undertaking SEZ activities.
- Have financial capacity, technical and managerial capacity, and associated track record of relevant development or operational projects required for developing or operating the SEZ.
- Own or lease land or premises within the special economic zone as stipulated under the Special Economic Zones (Land Use) Regulations to be enacted within 180 days of the coming into force of the Act.

Benefits under the SEZA

Tax Benefits

Under the Act, all licensed special economic zone enterprises, developers and operators shall be granted exemption from all taxes and duties payable under all the domestic tax legislations including the East African Community Customs Management Act. The benefits apply on all special economic zone transactions.

However, the Finance Act 2015, which was assented to on the same day as the SEZA appears to limit the tax incentives by amending the Income Tax Act and the Value Added Tax (VAT) as follows:

- SEZ enterprises, developers and operators will be subjected to reduced corporate rates of 10% for the first 10 years of operation and 15% for the next 10 years.
- Dividends received by licensed SEZ enterprises, developers and operators are exempt.
- Withholding tax on professional services and interest (other than dividends) by a SEZ enterprise, developer and operator to nonresidents to apply at 10%.
- The supply of taxable goods to special economic zones enterprises, developers and operators licensed under the SEZA are exempt from VAT.

In effect, the above amendments appear to be inconsistent with SEZA which offers unlimited exemption on all taxes. It would be paramount that the inconsistency is addressed prior to the issuance of the licenses under the Act.

Work permits

The licensed special economic zone enterprises, developers and operators shall be entitled to work permits of up to 20% of their full-time employees. However, on the recommendation of the Authority additional work permits may be obtained for specialized sectors.

[111] Source: http://www.ey.com/GL/en/Services/Tax/International-Tax/Alert--Kenya-enacts-Special-Economic-Zones-Act-2015, d.d. 9 August 2016

Other exemptions

- Stamp duty on the execution of any instrument relating to the business activities of special economic zone enterprises, developers and operators
- Provisions of the *Foreign Investments and Protection Act* relating to certificate for approved enterprise
- Provisions of the *Statistics Act*
- Payment of advertisement fees and business service permit fees levied by the respective. *County Governments' finance Acts*
- General liquor license and hotel liquor license under the *Alcoholic Drinks Control Act, 2010*
- Manufacturing license under the *Tea Act*
- License to trade in unwrought precious metal under the *Trading in Unwrought Precious Metals Act*
- Filming license under the *Films and Stages Plays Act*
- Rent or tenancy controls under the *Landlord and Tenant (Shops, Hotels and Catering establishments) Act*
- Any other exemption as may be granted under the SEZA in consultation with the Cabinet Secretary for that matter, by notice in the Gazette.

Rights of SEZ Enterprises

Under the Act, a licensed SEZ enterprise shall enjoy certain rights such as, profit and capital repatriation, the full protection of its property rights against all risks of nationalization or expropriation and industrial and intellectual property among others.