Some Highlights on the Status of Healthcare in Africa

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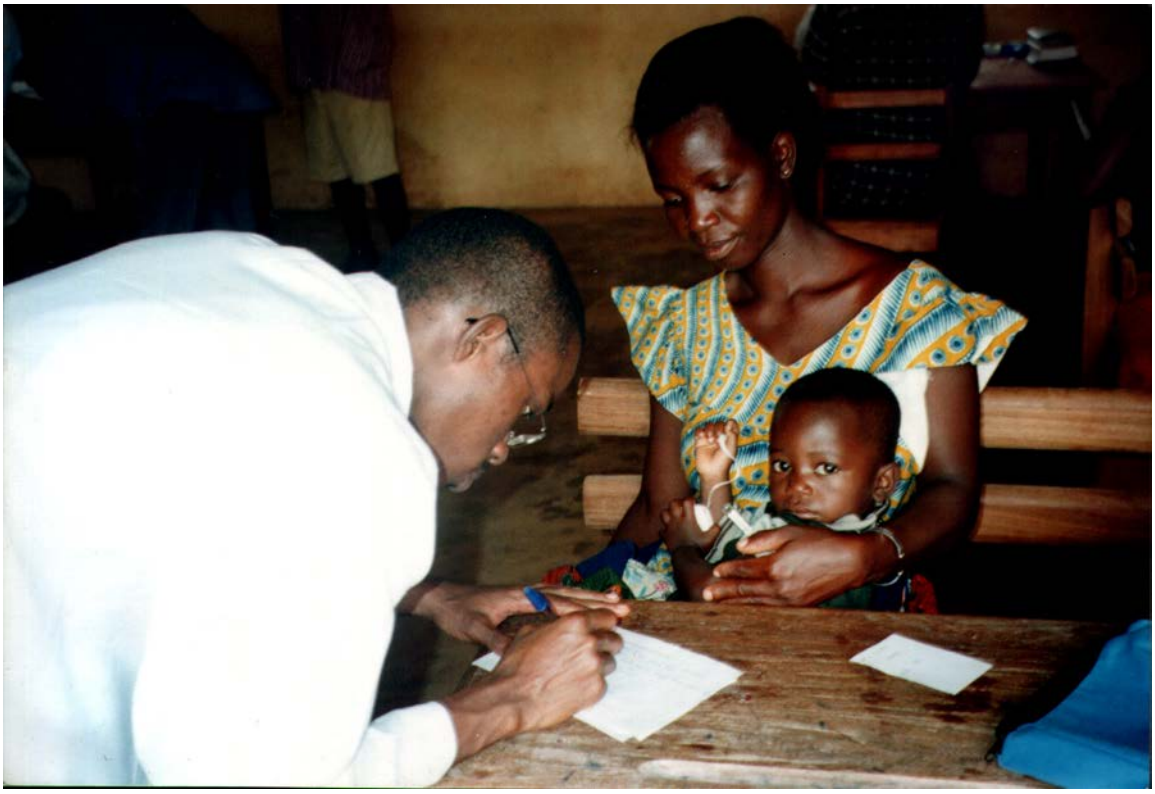

The extremes of healthcare in Africa.
By Mathew Otieno

From one country to another, living and dying could not be more different.

February 28th is Rare Disease Day, a worldwide observance co-ordinated by the Consumers, Health, Agriculture and Food Executive Agency of the European Commission. This week you are likely to see on your evening news bulletin the "face" of the awareness campaign, Mirena, who is living with Ehlers-Danlos syndrome.

This rare connective tissue disorder can be disfiguring and lead to chronic fatigue as well as difficulties in walking. Groundbreaking research promises a better life for those with the condition.

In Africa, the challenges are a little different. Common diseases remain almost as deadly as they've always been; even while the rare ones take their toll. This is because many parts of the continent still lack a good, basic healthcare system. However, hope is to be found in the fact that incredible success stories can also be seen across the continent.

To illustrate the situation, this article will focus on the two countries that epitomise the two extremes of healthcare in Africa; extreme improvement and extreme failure. The country that corresponds to the former is, no doubt, Rwanda, which features quite frequently on this blog. The latter case will be well illustrated by its giant neighbour to the west, the Democratic Republic of the Congo (DRC).

It is still impossible to say anything about Rwanda without a preface on the genocide from which the country dragged itself in 1994. From the piles of human bodies littering the countryside after that fell time, Rwanda has become one of the countries pointed at to show that even the most hopeless cases can be turned around, in healthcare as in much else. Even Americans admire it and wish their healthcare system was half as good.

In practically every metric, Rwanda has improved significantly. Infant mortality has decreased by almost 70 percent in the last 18 years, to 30 per 1000 live births. Some 97 percent of all Rwandese women and girls are vaccinated against HPV, a major predictor for cervical cancer; this is among the best rates in the world. Life expectancy has increased from 48 to 64 since 2000, at a rate far outpacing all its neighbours.

The number of hospitals and clinics, as well as the doctors and medical workers who staff them, has increased. On average, a Rwandese citizen now sees a doctor twice a year, compared to once every four years in 1994. So successful has it been, Rwanda is now experimenting with futuristic technologies in the sector. It is using drones to deliver drugs and blood to remote areas, which would be hard to reach otherwise.

A lot of this success has been attributed to the healthcare system the country developed in the early 2000s. A community-based health insurance scheme, where the poorest pay nothing and the richest pay a seemingly paltry 8 USD (Rwanda's GDP per capita is 754 USD, so it isn't paltry at all) per year, Rwandans are able to cover 45 percent of their country's total

healthcare costs. The rest comes from the government and donors. This system covers 96 percent of the population.

Not all is a bed of roses however. Such an efficient system, especially when it is funded by donors, easily lends itself to the promotion of what to the rational mind would not pass as healthcare. The same drones that deliver regular medicine also deliver contraceptives and condoms. The same hospitals where successful births are midwifed also sterilise men and put IUDs in women. It is a heinous blemish on what is perhaps the healthcare system all of Africa should adopt.

And nowhere could such an adoption do more good than in the country on the other side of Lake Kivu. In the DRC, one is always tempted to say the situation could be worse. But in Congo, the worst has already been experienced. Many times over. Things always could be better. Except they never are. The country has one of the least effective healthcare systems in the world, if it even qualifies to be called a system.

Of course, it wasn't always so. At independence, the DRC had more hospital beds per person than all African colonies combined. Sure, that system was there to take care of Belgian colonists. But it was there; and could well have been turned and adapted to serve the citizens of the independent country. Sadly, Congo's trajectory has never trended upwards for significant periods of time.

Preyed upon by kleptocratic government bureaucrats in the times of Mobutu, constrained by limited manpower and finances afterwards, and hampered by the vastness and roughness of the terrain as well as constant insecurity in our own times, organised healthcare is so alien to the Congolese people that over 70 percent of them have no access to it.

Infant mortality is 104 per 1000 live births. It has the second highest number of Malaria cases worldwide. Its share of tuberculosis patients in the world is among the highest. Malnutrition is a widespread problem; its effects on women who are pregnant or of childbearing age are profound.

To confound the situation, there is very little data about the sector, and little means of collecting it, to even have an accurate finger on the pulse of the country. So all the statements above are based on estimates; the situation is likely worse. And, to crown all the confusion, the current status is seen as an improvement from the past.

Reading about healthcare in the DRC is depressing, so it bears mentioning that there is a hospital, called Monkole, which is doing a lot of good work in the Capital Kinshasa. It, and a few others, are encouraging spots of brightness. One hopes this brightness will soon be reflected in the whole country, if only it can survive the political turn it has taken recently.

These two countries, then, illustrate the state of healthcare in Africa – which would be too vast otherwise to even begin writing about. They show clearly that success can be had – even though it may come with shadows – and that, where little effort is made, healthcare systems can be so emasculated as to be non-existent.

So, Africans have their share of rare diseases, and quite share it is. Nevertheless, in much of the continent, they compete for rarity with good basic healthcare systems that every Western citizen may take for granted. It is on developing these that African countries should focus for now. There is no lack of example on how that can be done.

LA SANTÉ EN RD CONGO : UNE ÉQUATION À PLUSIEURS VITESSES.

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La santé, l'éducation et la formation, considérés autrefois par la Banque Mondiale et les Fonds Monétaires Internationales comme de secteurs budgétivores pendant la période d'ajustement structurel sont devenus la triptyque de développement par excellence pour les mêmes institutions et toujours en Afrique. Ces institutions de Bretton Woods considèrent que le capital humain est le plus important de tous pour le développement. Mais cet homme ou cette femme doit être bien formé et bien éduqué, mais aussi il (elle) doit être en bonne santé. Sauf que dans l'entre-temps, les dirigeants africains ont intériorisé la maxime et ne fournissent aucun effort dans la plupart de cas et rechignent à y consacrer les moyens nécessaires. C'est ainsi qu'en RD Congo le secteur de la santé est budgétisé pour moins de 3% et celui de l'éducation à moins de 2% annuellement par l'État. La conséquence est que la santé et l'éducation de qualité se trouvent entre les mains des privés. Or, qui dit privé, signifie la poursuite du lucre sans souvent se préoccuper de la qualité. Et, là où la qualité est au rendez-vous, alors c'est encore plus difficile que le simple citoyen puisse s'y rendre pour se faire soigner et bien étudier. C'est dans ce contexte que l'on parle de la santé à plusieurs vitesses.

La première vitesse est celle des établissements hospitaliers de l'État sans financement. Ils sont dans la plupart de cas appelés : mouroirs. On y entre pour en sortir sur une civière vers la morgue. Ces établissements manquent de tout : équipements, matériels, laboratoires, personnels de qualité, etc. Chaque médecin de renommé qui travaille dans les établissements publics a son cabinet privé dans lequel, il oriente ceux qui peuvent payer son tarif. Et les autres n'ayant pas de quoi payer sont abandonnés à leur triste sort. Toutefois, ceux qui n'ont pas grande chose dans leur bourse sont à la merci des infirmiers et médecins stagiaires. Le cas emblématique est l'hôpital général de Kinshasa appelé autrefois Mama Yemo.

La deuxième vitesse est celle des établissements hospitaliers de l'État avec subsides. Les spécialistes en médecine s'y trouvent et sont compétents. Sauf qu'ils utilisent les infrastructures et les laboratoires de l'État, mais avec leurs propres matériels et équipements pour soigner les malades fortunés ou les autorités publiques pouvant payés la facture de chaque spécialiste associée aux frais de l'État qui sont dérisoires. Cela signifie que chaque médecin apporte ses équipements et matériels pour soigner dans les installations de l'État. Le cas exemplatif est l'hôpital Ngaliema.

La troisième vitesse est celle des hôpitaux publics se trouvant en provinces ou dans ce que l'on qualifie de l'intérieur du pays. Ces hôpitaux manquent de tous en commençant par les médecins spécialistes et d'une bonne formation car avec les institutions d'enseignements supérieurs que le pouvoir public à travers le ministère de l'enseignement supérieur autorise de fonctionnement à l'intérieur du pays sans s'assurer du nombre et de la qualité des enseignants octroient des diplômes en médecine entre autre dans des conditions d'apprentissage et de formation douteuse. Ce sont ces médecins mal formés qui soignent à

l'intérieur du pays principalement. Ils deviendront meilleurs peut-être après avoir conduit un bon nombre des Congolais et Congolaises vers la morgue.

La quatrième vitesse est celle des 'Ligablos'1 de santé appartenant aux privés. Ces centres de santé de fortune se trouvent partout. Sans médecins ni infirmiers (e) de qualité, ils sont spécialisés dans la plupart de cas pour toutes les maladies. Se trouvant sur les avenues et proches de la population, c'est là que l'on se présente pour les premiers soins avec risque d'y laisser sa vie si les choses se compliquent. Il s'agit dans la plupart de cas des établissements de transit.

La cinquième vitesse est celle des établissements hospitaliers privés. C'est là que l'on soigne généralement dans de bonnes conditions. Sauf que les soins ne sont pas à la portée de la majorité de la population. Ces établissements se trouvent principalement dans les grands centres urbains. Les services de radiologie avec scanner et l'IRM par exemple s'y trouvent. Le Centre Hospitalier Monkole est le porte étendard.

La sixième vitesse est celle des tradi-praticiens ou la médecine des pauvres. Ceux qui ne peuvent aller dans l'un ou l'autre centre précédemment cité sont obligés d'aller voir le tradi-praticien de son village ou de son quartier. Sans connaître la dose ni la spécificité de la maladie que telle ou telle potion soigne, ils sont à la base de beaucoup de cas d'intoxication. La majorité des Congolais (es) consultent cette 'médecine' dite des pauvres avec les conséquences que nous pouvons envisagées.

C'est dans ce contexte que nous pouvons parler de soins de santé en RD Congo ; des soins de santé non couvertes par une assurance. Des soins de santé dont chaque individu doit payer selon sa fortune. Et, le pauvre n'a qu'une solution, la tradition ou être pris en otage dans un centre hospitalier après la guérison ou l'accouchement d'un bébé. Le chemin est long pour parler des soins de santé possible pour la majorité de la population ou d'une couverture universelle de santé en RD Congo. Il s'agit encore des soins de santé pour les riches qui non seulement payent chez les privés mais peuvent aller en Europe en cas de complication, mais aussi pour une question de prestige et d'une autre nationalité pour le nouveau-né. Cette situation de la RD Congo est transposable sur la majorité des pays africains.

[1] Le Ligablo est un terme *lingala* (la langue parlée à Kinshasa principalement) qui signifie une petite boutique dans laquelle on vend tout sans se préoccuper des conditions ni de l'origine et de la qualité de la marchandise. Ce qui importe, c'est le gain.

The Health Care in Kenya.

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1. Introduction

The Republic of Kenya is the 4th largest economy in Sub-Saharan Africa (SSA) and Nairobi is its capital city. Mombasa is the main sea port of the country. More than 60% people of Kenya live below the poverty line (less than $1 a day or unable to afford to buy food providing a daily intake of 2,100 kilocalories). Like other SSA countries, Kenya faces major socio-economic and health challenges[i].

After Kenya's independence of 1963 the Kenyan government initiated a free health care system for all. However due to the stagnation of resources the government introduced the charging of fees in some sectors. In 1992, reorganization 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 marginalized areas[ii].

In 2010 Kenya had a new Constitution. The provisions of this constitution started to be effected when a new government was formed in 2013. Several changes in roles and responsibilities in the delivery of healthcare came to force. The most important of these was the transition of responsibilities in both primary and secondary health care services from the national government to the counties. Since then the Ministry of Health (MOH) is limited to only providing support and procedural guidance through the regulation of health care to the counties as well as provision and regulation of man power. The aim of this devolution of healthcare services was to enhance equity in resource allocation, thereby improving service delivery to the majority of Kenyans, especially those residing in rural and marginalized areas. Devolution has had many challenges, but at the same time it has since brought about the need for each county to manage and be accountable for its own resources thereby becoming a pace setter in measuring the performance of a counties administration and core leadership.

2. Structure of Health Care facilities in Kenya

The health sector in Kenya consists mainly of government run facilities (41%), non-governmental organizations (15%), faith based organizations and private health care businesses at 43%. (*The American Journal of Public Health*). It is not surprising to note that private businesses and faith based organizations provide the best facilities. It is important to note that private health businesses are usually not pocket friendly for many Kenyans.

Health facilities are distributed regionally, with the most sophisticated services available in the major cities or only at the national level. The National Kenyan healthcare system is structured into six levels:

(i) Level1: household/community; serving 1,000 – 4,999 people
(ii) Level 2/3 facilities: dispensaries and health centres serving a population of 5,000 to 20,000;
(iii) Level 4 facilities: sub-county hospitals that serve 500,000-1,000,000;

(iv) Level 5 and 6 facilities: counties and national referral centres that serves a population of over one million people[iii].

At the top of the service spectrum are the National, Referral, and Teaching Hospitals (NRTH). The next rung boasts the best provincial hospitals, followed by sub-district hospitals. Beneath these one finds the sub-district Level, which are health centres and dispensaries. Finally, at the bottom comes community health organizations[iv] (See Appendix).

Common Ailments

Accordance to the Kenya National Strategy for the prevention and control of non-communicable diseases, the most prevalent cases in are upper respiratory infections/diseases, malaria, cancer, and diabetes and HIV Aids. The sad thing is that many treatable ailments, especially in the rural areas continue to be killer diseases especially for poor families.

Kenyan Government Campaigns to eradicate Communicable diseases

a) –Tuberculosis Campaigns

TB is considered to be one the most communicable killer diseases in Kenya. Screening campaigns are seen to be the one of the best ways in the developing world to diminish the spread of this disease. Thus it was noted that between 2006 and 2012 TB infections in Kenya were brought down from as high as 116,000 people infected in 2006 to 106,000 people infected in 2012 (*Aljazeera News, 2012*)[v]. This campaign is still ongoing to ensure that more people especially in the rural areas, are aware of its spread of TB, and can easily identify the symptoms. They are also helped to build awareness as to where treatment can be found. Availability of TB drugs in most health centres has managed to make the treatment of this disease bearable and do-able long term.

b) Anti-malaria campaigns

A leading cause of illness and death in Kenya is Malaria. In 2009, the ministry of health (MoH) launched a campaign (*National Malaria Strategy 2009 – 2017, 2009*)[vi] to get Kenya free from malaria - long term. Some of the initiatives that are on course include; tracking changes in malaria transmission, piloting school-based malaria parasite control (testing and treatment of school children), capacity building of staff at all levels, advocacy activities and the use of popular events including sports and other opportunities for malaria control advocacy. (*Nation Newspapers, 2009*)[vii]

c) AIDs prevention and Control Campaigns

29 percent of annual deaths are as a result of HIV complications, 20 percent being maternal mortality, and 15 percent of deaths of children under the age of five. (*Kenya HIV County Profiles, 2016*)[viii]. The young people though constitute the largest proportion of people living with HIV. Notably, they have contributed 51% of adult HIV new infections showing rapid rise from 29% in 2013. (*Kenya Aids Response Progress Report, 2016*).[ix]

The strategies being applied to reduce HIV infections include:

1. Increase coverage of combination HIV prevention interventions
2. Prioritize populations and geographic locations for an equitable HIV response.

3. Leveraging on different sectors and emerging technologies for HIV prevention
4. Maximizing on the efficiencies and effectiveness of an integrated HIV, TB/SRH prevention response
5. Strengthening research and innovation
6. Increasing domestic financing for a sustainable HIV response
7. Strengthening integration of health and community systems
8. Using a human rights approach to facilitate access to services for PLHIV, Key populations and other priority groups in all sectors
9. Improving health outcomes and wellness of all people living with HIV (*Kenya Aids Response Progress Report, 2016, pg.2)*

3. Current challenges in the Kenyan Health Sector

Some of the current challenges that are being faced within the health sector include:

- ***Frequent health workers strikes and lack of proper equipment***

There has been frequent strikes by health workers based on pay, poor equipment and low number of staffing. The continual poor management of human resources for health remains one of the weakest links in the current system. Recruitment, retention and remuneration of health workers across the board have suffered, and more health facilities are going without medicines and supplies than ever before. (*Sunday Nation, 2017*)[x]

- ***Poor referral systems***

Most patients being taken care of at referral hospitals suffer from minor ailments and can be handled at lower level facilities. However, referral guidelines are still wanting and thus this has continued to be a thorn which needs to be addressed quickly. The health care facilities are not networked and therefore makes it hard for facilities to communicate. (*Sunday Nation, 2018*)[xi]

- ***Long waiting times at the hospitals***

The amount of time patients spend waiting for services can substantially affect health care-being sought by sick patients. The largest proportion of patients reported spending more than two hours waiting for care at national and provincial hospitals (23%), district and sub-district hospitals (10%), and public health centres (10%). This affects greatly the number of people who actually seek help in the early stages of a disease. (*Institute for Health Metrics and Evaluation (IHME). pg. 46,)*[xii]

- ***Doctors not wanting to be deployed in rural areas***

Under the centralized system, most health workers preferred to work in urban areas, leaving rural communities severely understaffed. Budget decisions that did not consider the unique needs of each county led to unequal distribution of resources.

This resulted in uneven health outcomes, with disadvantaged districts recording much higher deaths among women and children compared to the national average. (*Sunday Nation, 2017*)[xiii].

4. General Measures being taken to tackle the health care challenges

- ***Access of NHIF to all***

NHIF (National Health Insurance Fund) registers all eligible members from both the formal and informal sector. For those in the formal sector, it is compulsory to be a member. For those in the informal sector and retirees, membership is open and voluntary. NHIF has managed to facilitate for those who suffer from terminal diseases such as cancer, renal failure where recurring treatment is needed.

- ***Devolution of services to counties***

Counties such as Makueni and Machakos have seen the improvement of its facilities with Makueni providing free health care to its citizens after an initial payment of the equivalent of 5 USD (Kshs. 500) for registration. (*Daily Nation, 2016)*[xiv]

- ***Government buying more equipment for hospitals in rural settings***

The government awarded various companies with a tender to provide cancer and radiology equipment, dialysis machines, resuscitation and high dependency machines, theatre equipment's according to the business daily Africa article. (*Sunday Nation, 2015*) [xv]

- ***Strengthening of Faith based organizations and provision of services***

Faith based organizations make a great contribution to health care services within Kenya.

Healthcare Centres run by among others: the Catholic Church, and some mainstream Protestant Churches. The Catholic Church has perhaps the largest number of healthcare services in the whole country. At times it is difficult to know exactly how many they are because they work quietly. Top in the list credit must be given to the Consolata Missionaries who for decades have given healthcare supported by their mother countries (Italy) and have hospitals in most of the least accessible places in Central Kenya. Their original objective, according to their website, was to care for the most marginalized persons wherever they work. Alongside the Consolata Missionaries are a host of other newer religious based healthcare initiatives which work under the auspices of the Catholic Church, such as the Sisters of Sisters who operate a large modern hospital in Nairobi, and the Assumptions Sisters of Nairobi (ASN) have recently set up 2 large hospitals, one in the capital city, Nairobi, and another in the Naivasha county. Both facilities offer good, clean and Christian health care affordable to medium income families.

Besides the Catholic Church, one of the earliest faith based healthcare facility is Kikuyu Hospital in Kiambu County. It is **owned and run by the Presbyterian Church of East Africa, (P.C.E.A.). It boasts its 105 years since it was founded in 1908. Since the hospital has grown to offer a wide range of services to patients in the area and all over Kenya. Of these services the best known is ophthalmology.** The Africa Inland Mission (AIM) previously known as the Africa Inland Church has for decades dedicated itself to healthcare for the poor in the highland zones of Kenya.

5. The Education sector efforts for the enhancement of Healthcare in Kenya.

Education remains the most effective method of eradication some of the preventable killer and disabling diseases in Kenya. The table at the bottom of this article captures the distribution of healthcare services and education in Kenya. It would be difficult to discuss the work done by most of them. I will therefore briefly mention two of the institutions which for work purposes am familiar with because both of them are should be of interest to Harambee Africa International in the sense that their original inspiration was St. Josemaría the Founder of Opus Dei. These are Strathmore University's Healthcare Education programme and Medical Centre, and **Kimlea Medical Centre.**

- ***Strathmore University: Executive Education for improved Healthcare management***

Strathmore University Business School (SUBS) together with a Research Institute hosted in the same institution have several healthcare education programs. (See table). The aim of the programs is to contribute towards fighting disease or finding new cure for it once contracted. These courses target mainly the health union leaders; clinical officers; hospital boards; resource mobilizers; and key people in learning institutions. The program covers the following areas

- Leadership management in healthcare
- Human resource management;
- Supply chain of pharmaceutical products;
- Record management in healthcare
- Finance in health management in the health sector.

In addition to that Strathmore has also collaborated with Intra Health and USAID to offer courses to county health management workers. (*Strathmore Business School interview, 2018*)

CREATES* (Centre for Research in Therapeutic Sciences) for *Research in Healthcare Management:

CREATES is a group of academic and research institutes that have come together with the goal of promoting innovation and appropriate research in therapeutic sciences and medical genetics. The institutions making up CREATES include Strathmore University as the lead institution, the Kenya Medical Research Institute (KEMRI), the Council for Scientific and Industrial Research (CSIR) of South Africa and the African Centre for Clinical Trials. (*CREATES PDF Document, pg1*) [xvi]

Their major goal is to address key health issues related to diseases of major public health importance in Kenya and the East African region. They do this in three different ways:

a. *Through the development of a reliable knowledge base platform underpinned by biostatistics, bioinformatics, computational biology and mathematical modelling.*

b. This seeks to provide quantitative answers to practical questions in biomedical research with the use of computational biology.
c. *Research through drug discovery, formulation and delivery including application of nanotechnology in medicine (nanomedicine).* (*Nanomedicine Workshop, 2014*)[xvii]
d. At the moment Creates is running ongoing clinical trials of Malaria, HIV in Ahero, and Sickle cell Anaemia at Strathmore clinic. (*Strathmore Interview, 2018*)
e. *Research on the genetics of disease.* This research seeks to develop a dais that will solve emergent public health problems of our generation by continuously seeking to understand genetic intersection of infectious and non-communicable diseases. (*CREATES PDF Document, pg15*)

Some of its collaborating institutions include; University of Nairobi, Albert Schweitzer Hospital, Gabon, Institute of Primate Research, Kenya, Kintampo Health Research Center, Ghana, Centre National de Recherche de Formation (CNRF), Burkina Faso, University of Utah, United States of America, University of Bamako, Mali and Manhiça Health Research Center, Mozambique, Ifakara Health Research and Development, Tanzania, University of Tübingen, Germany, Radboud University Nijmegen, Netherlands, Hospital Clinic of Barcelona, Spain, Swiss Tropical Institute, Switzerland, University of Oxford, UK, Sanaria Incorporation, USA, Norvartis, Institutes for Biomedical Research, Switzerland, The British Council, The World-Wide Antimalarial Resistance Network (WWARN), The University of Cape Town (UCT) (South Africa), International AIDS Vaccine Initiative, and the Bill & Melinda Gates Foundation (BMGF). (*CREATES PDF Document, pg18*)

a) Strathmore Medical Center

The Strathmore Medical Centre began its operations in 2011 and offers a comprehensive range of out-patient services. The centre was opened with the intent of providing good health services to Strathmore staff and students.

There is a medical endowment fund which provides medical services to those who may not be able to access quality care at the centre. Students are required to pay a medical fee as part of their yearly school fees. This guarantees that all students access medical care when needed at a reasonable cost.

The medical centre also promotes health awareness with the recent campaign being on sickle cell anaemia. The centre invites people experiencing this disease for treatment and counselling. They also encourage regular health screenings and mental wellness. This ensures that healthy lifestyles and habits are formed with the students emulating preventative habits rather than curative ones.[xviii]

b) ***Kimlea Medical Center***

Kimlea Medical Center is a healthcare project initiated by Kianda Foundation[xix] in the Tigoni area of Kiambu County. The aim of setting it up was to cater for the medical needs of children and their parents who work in tea picking industry. This population gets a pittance as salary which means that they have to live with less than 1USD per day. In this population child mortality and malnutrition were found to be high among the approximately 6,000 people living and working in the squalid conditions in tea plantations. The most affected are the more than 4,200 children between 2 and 14 years of age.

The services given in the Medical Centre include, among others: doctor's consultation, regular check-ups, and counselling services. Where possible, the Centre also tries to provide procedural interventions such as surgery. The centre also offers its health program to nearby schools. To date there is an outreach healthcare program for primary schools. The following schools have been the most successful beneficiaries: Umoja Primary School; Limuru Mission Primary School; King'othua Primary School; Riara Primary School and Immaculate Mary Nursery School in Banana Hill, Kiambu County.

Conclusion

A lot is being done in the health sector to bridge the gap and ease the burden of a Kenyan of poor health. Education, better care facilities and accessibility has become better due to the various collaborations between the health ministry and various stakeholders within the health system. However more still needs to be done. In Kenya there is a need to ease the burden of the already overstretched services. Better pay and good conditions for the workers may only translate to an improved environment for patients and might offset the migration of qualified staff to other countries where pay is better.

Devolvement of the service has seen governors in various counties who have the will to improve services empower and facilitate better health care for their people.

It might not seem plausible for now but with accountability and resources available to counties, change and improvement will be on the rise.

More efforts though have to be placed by the MOH to invest heavily in research and specialists so as to reduce the cost per head to its citizens.

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Appendix 1: Table on Healthcare Education Providers in Kenya

Obtained from: The second national capacity assessment report on leadership, management and governance in Kenya: a national health sector review, (2015), Ministry of Health, http://www.health.go.ke/wp-content/uploads/2017/11/second-kenya-health-leadership-and-management-assessment-report.pdf

Name of Institution	Programme and establishment date	Focus of the curriculum	Mode of delivery	Experiential learning (placement > 1 week)
Public				
Kenya Medical Training Centre (KMTC)	**Diploma:** Health Systems Management; Community Oral Health Est: 2010 Est: 2001 **Certificate:** Est: 2010	Health Systems Management Health Services Management	Face-to-face	None
Kenya School of Government	**Certificate**: Senior Management Est: 2010	Management Course	Face-to-face	3 month project
Egerton University	**Degree**: BSc Community Health; Reproductive Health; Child Health & Paediatrics	Leadership, Management & Governance	Face-to-face	3 months

Moi University	**Degree**: Undergraduate **Degree**: Masters Public Health Est: 1998 **Certificate**: Est: 2014	Health Services Management Health Services Management Health Systems Research	Face-to-face & practicum Face-to-face Blended	6 weeks per year for 4 to 5 years (25% curriculum – COBES) None 1 month
University of Nairobi	**Degree**: Masters Public Health, MSC **Degree:** PhD	Health Systems Management	Face-to-face	None
Kenyatta University	**Degree:** Masters Public Health - HSM	Health Services Management	face-to-face	None
Private				
AMREF Health Africa	**Diploma**: Integrated course program **Certificate**: Est: 2012 (Regional)	Health services management Health systems management	eLearning Face-to-face	None None
Strathmore University	**Certificate:** Executive Health Care Management Program Est: 2008	Leadership, Management & Governance	Face-to-face	3 month
	Certificate: Managing Health Care Business – Executive program Est: 2014	Leadership, Management & Governance	Face-to-face	-
	Degree: MBA Healthcare Administration Est: 2013	Health Policy, Health Care, Health Systems and Supply Management	Face-to-face	-
	Certificate: LeHHO (Leading High-Performing Healthcare Organisations) – Executive program Est: 2010	Leadership, Management & Governance	Face-to-face Modular	Workplace
USIU – United States International University	**Degree:** MBA Global Executive Est: 2013	Health Leadership & Management	Face-to-face Modular	-

Great Lakes University of Kisumu	**Degree**: PhD Integrated Module MSc. CHD	Health Systems Management	Face-to-face	3 months partnership project
Kenya Methodist University	**Degree:** • BSc- Est: 2008 • MSc - Est: 2008 • PhD - Est: 2014	Health Systems Management	Face-to-face Blended	None
Mt. Kenya University	**Certificate:** Healthcare Management	Health Administration	face-to-face	None
Aga Khan University Hospital	**Degree:** Master of Medicine	Doctor	face-to-face	None
Other Institutions				
Kenya Institute of Management	**Certificate:** Healthcare Management Est: 2004	Health Management	face-to-face	None
Capacity Kenya	**Certificate** courses	Project Management	face-to-face	None
CORAT - Christian Organizations Research and Advisory Trust for Africa	**Certificate** courses	Health Management	face-to-face	None
CHAK – Christian Health Association of Kenya	**Certificate** courses	Supplies Management	face-to-face	None

Obtained from: The second national capacity assessment report on leadership, management and governance in Kenya: a national health sector review, (2015), Ministry of Health, http://www.health.go.ke/wp-content/uploads/2017/11/second-kenya-health-leadership-and-management-assessment-report.pdf