KAKAMEGA COUNTY

HEALTHCARE INNOVATIONS

OPEN Phences

Bridging the Public-Private Healthcare Divide

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KAKAMEGA COUNTY INNOVATIONS REPORT [Innovations in Healthcare: Kakamega County]

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FOREWORD

Counties across Kenya are working towards universal healthcare. Increasingly, they are recognizing the value of combining strengths and capacities of both the public and non-public sectors, yet information on the latter is often scanty or missing altogether. At the same time, there is a tendency towards reduced development assistance for health, which means that Kenya (like most other low- and middle-income countries) will need to identify alternative sources of resources (human, financial, technological, and physical). All these factors underscore the importance of encouraging public private sector engagement, collaboration, and partnership.

Effective engagement requires good information on what is happening outside of the formal government systems. It is for these reasons that the Open Phences Hub is undertaking to map tech and non-tech innovations taking place within the counties in Kenya.

Limited resources amidst boundless need create a huge demand for innovation. But these are unlikely to have meaningful impact, if policy leadership fail to appreciate their existence, role and impact, and therefore, consider them as resources during planning and budgeting.

This 'Kakamega County innovations' report presents a summary of county information (general and healthcare information), selected healthcare indicators and county innovations (description and distribution). It has been prepared for a diverse audience. Anyone working/having interest in healthcare space and related sectors including health management teams, health facility managers, practitioners, health service users, persons working in health financing institutions, innovators, communities and community-based organizations. It was also developed to help healthcare managers appreciate the diversity of ideas and resources available within and outside of their jurisdictions. Finally, it was developed for health providers and investors to understand innovations, who they are targeted at, how they work, and what their (perceived and measured) impacts) for adoption and/or scaling.

The Open Phences team developed this document in recognition (a) the gap in the healthcare system on the low awareness of health system users on existing innovations and their potential impact, excessive fragmentation and duplication of innovations that serves similar functions but don't speak/connect with each other resulting in small scale innovators and ideas which have low probability of scaling (b) county management teams do not have a one resource where they can access information about the available health infrastructure, mortality and morbidity indicators and health service utilization indicators (that is updated on a regular basis).

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Paul Waswa
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INTRODUCTION

Definition of Terms

Dominant economic activity - This is the economic activity that contributes the highest gross value added to the county GCP

Gini coefficient - The Gini coefficient is a statistical measure of economic inequality in a population. The coefficient measures the dispersion of income or distribution of wealth among the members of a population.

Age dependency ratio- This is the proportion of the population (age 0-14 and 65+ years) that is dependent on the working population (age 15-64 years).

Old-Age Dependency Ratio- This is the population aged 65 years and above relative to the total number of persons aged 15-64 years.

Child Dependency Ratio - This is the number of children aged below 15 years relative to the total number of persons aged 15-64 years.

Total fertility Rates - The average number of children a woman would have throughout her childbearing years (15-49).

Child Immunization (Fully Immunized) - This is the proportion of fully immunized children from 0 to 59 months.

Rural Access Index - Measures the proportion of the rural population that can access an all-weather road within two kilometres.

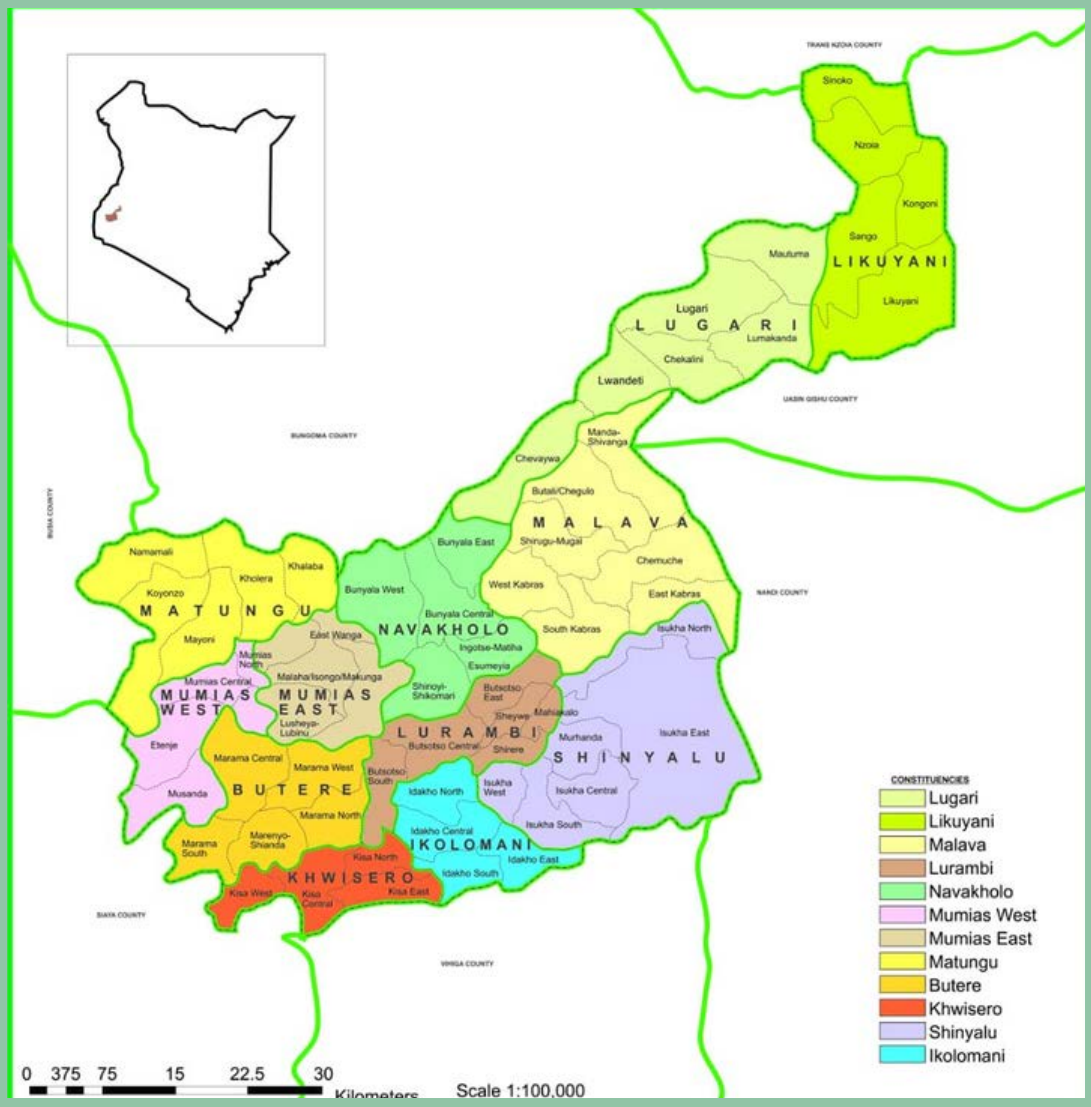
County Information

Overview

Kakamega County is located in the Western part of Kenya. The term Kakamega comes from a local dialect which means ‘pinch’, which was used to describe the way the European colonists used to eat the staple food of the residence of this town.

The county borders Vihiga County to the South, Siaya County to the West, Bungoma and Trans Nzoia Counties to the North and Nandi and Uasin Gishu Counties to the East.

The County covers an area of 3,051.3 KM2 and is the second populous county after Nairobi with the largest rural population. It comprises of 12 Sub-counties, 60 wards, 187 Village Units and 400 Community Areas.



Demographic Features

Kakamega county has a total population of 1,867,579 persons. Of all these 897,133 are male and 970,406 are female.

The county has a population density of 619 persons per square kilometre.

The human development index (health and longevity, education and living standard) has risen from 0.530 in 2010 to 0.555 in 2015.

The major economic activities in Kakamega is farming. Other economic activities include fishing, small scale gold mining and the strategic location of the town enables the residence to participate in trade with there partners in nearby towns such as Bungoma to the north, Trans Nzoia to the north east, Uasin Gishu and Nandi counties to the east, Vihiga county to the south, Siaya county to the south west and finally Busia to the West.

OTHER FEATURES

FEATURE	ESTIMATE
Gini coefficient	32.1
Age dependency ratio	95.2
Old age dependency ratio	8.0
Child dependency ratio	87.1
Human development index	0.555
Rural Access Index - %	81
Population owning mobile phones (%)	40.9
Population accessing internet (%)	9.1

Health Information

Health Infrastructure

The Kakamega County Health system is organized in accordance with the Kenya Essential package of health (KEPH) level structure from the household level to primary health care level to hospital level offering referral and specialized services. The county has 1 level 5 facility, 19 level 4 facilities, 83 level 3 facilities and 250 level 2 facilities (KMFL).

The total bed capacity in the county for all the public and private facilities is 3,949 with the public sector having 2,338 beds while the private hospitals have 197 beds. The bed capacity in the mission/NGO health facilities is 1,414 (CIDP).

In terms of distance to the nearest health facility, it takes 51.1 per cent of the population about 5km to the nearest health centre while 32.2 per cent take between 1.1 and 4.9 km to the nearest facility. Further, 16.7 per cent of the population however travel a distance of less than one kilometre.

Health workforce

The doctor population ratio stands at 1:34,916 while the nurse patient ratio is 1:2,658. The county has a core health workforce density of 10/10000 of the population.

HEALTH OUTCOMES

INDICATOR	OUTCOME	YEAR
Child immunization(%)	96	2019
people living with HIV	50,844	2019
Delivery at health facility(%)	90.6	2019
Total fertility rate	3.1	2019
Infant mortality rate	37.3	2019
Under-5 mortality rate	60.2	2019
Maternal mortality rate	279/100,000	2019
Households accessing safe drinking water (%)	72.3	2019
Health insurance coverage(%)	14.8	2015/2016

Tech-Innovations

Jacaranda Health

EMONC Mentorship

The Innovative solution
EmONC mentorship is an on-the-job training program on essential elements of quality maternal newborn care that Jacaranda Health has adapted into the public sector. Jacaranda's mentorship team has contributed to the development of a national EmONC mentorship package for providers across the country, incorporating learnings and best practices.

The RMNCAH need
Close to 60% of deliveries in Kenya occur at health facilities, but the quality of maternal care in the country remains inconsistent. With over 6000 women dying annually during child birth, low quality of clinical care and inequitable access to quality maternal care are major drivers of poor maternal and newborn health outcomes.

Addressing the need
The approach includes developing integrated training materials adapted for the public facility context, creating a network of public sector nurse champions or mentors, moving training from classrooms to facilities where deliveries take place, and incorporating simulations to ensure that critical, practical life-saving skills are correctly applied.
The program has also developed a standardized toolkit that enables the trained mentors to guide trainees at their assigned facility towards continuous quality improvement.

Prompts

RMNCAH Need
Maternal mortality ratio of 342 deaths per 100000 live births in Kenya. Newborn deaths contribute to almost half of all deaths of children under 5 years and younger in Kenya. Most of these deaths are either preterm deliveries or complications occurring at child birth (intrapartum). In an audit of deaths that occurred in 2014, delays in care-seeking was identified by the national committee that it contributed to 30% of maternal deaths. Empowering women with knowledge about pregnancy complications is critical to enable then seek care at the right time and place.

Innovative Solution
PROMPTS is a digital health platform offering free targeted two-way messaging and a help desk service to new and expectant mothers regarding pregnancy and newborn health-related questions. It empowers women to seek care at the right time and place, with women receiving personalized health messaging via the platform at different stages of their pregnancies. The personalized messages include: critical information on health, tips on financial planning for delivery, newborn nutrition, family planning and immunization.

Behavioral nudge Approaches to address Systemic Gaps in the post-natal continuum

The Need

Kenya continues to have large gaps in the quality and continuity of postpartum maternal care. Half of mothers report receiving no postnatal care within 48 hours after childbirth, while 90% of women have unmet needs for family planning at 3 months postpartum. Low uptake of postnatal care and family planning services are major contributors to poor MNCH outcomes.

The Innovation

Jacaranda Health designed, deployed, and evaluated the effectiveness of an SMS postpartum checklist. The checklist was comprised of SMS messages that asked women to check for danger signs and “nudged” them to return for postnatal and family planning care. The web-based postpartum questionnaire sent via SMS which will trigger automated referrals to seek facility care and phone calls if certain danger signs are present. This tool will aim to increase the uptake of postpartum care and post-partum family planning to improve health outcomes for mothers and children in Kenya.

The innovation has added new features including messages targeting antenatal care.

Empower Health

Empower Health in Kenya was launched in 2017 as a landmark Public-Private Partnership (PPP) between the Ministry of Health of Kenya, the County Governments Kakamega, Medtronic LABS, and Kenya Defeat Diabetes Association.

The Need

The burden of non-communicable diseases (NCDs) is increasing in sub-Saharan Africa. In Kenya, it is estimated that approximately 24% of the adult population has hypertension, with only 4% having their blood pressure adequately controlled.

Together with our partners, Medtronic LABS developed a technology-enabled model of care with patients at the center, but with the larger system in mind. It takes a population health approach to chronic disease: screen, diagnose, risk-stratify, manage, and improve clinical outcomes for patients as early as possible and as efficiently as possible.

The Empower Health model consists of a mobile device, an automated blood pressure machine, a glucometer, and a novel proprietary software application — combined in a unique platform for efficient screening and longitudinal management of a patient cohort. Leveraging the model, physicians provide patients with tailored management plans.

Patients can access regular blood pressure and blood glucose checks at community-partner locations or at home where they receive real-time feedback on their measurements. On the mobile application, clinicians can view patient data, provide direct patient feedback on their conditions via SMS, and write electronic prescriptions — accessible through participating pharmacies.

Non-Tech Innovations

ESM-UBT

Organization: Massachusetts General hospital (MGH)
Partners: Kisumu Medical and Education Trust (KMET), the Center for Maternal Health Innovation (CMHI), and the Kenya Obstetrical and Gynecological society.

The RMNCAH Need
Among the leading and common causes of maternal deaths in Kenya is postpartum hemorrhage (PPH).

The innovative solution
Every Second Matters for Mothers and Babies-Uterine Balloon Tamponade (ESM-UBT) an innovative device to help control postpartum hemorrhage (PPH) especially in resource constrained settings.

Boda boda Drivers

The Need
Lack of access to healthcare services in areas with poor transport system. Expectant mothers are not able to each the health facilities at the time of need/ required time.

Boda boda drivers (ambulances) were introduced to ferry pregnant mothers to health facilities in the APHIAplus western project. At each mother's ANC visit, they receive the number of a boda boda rider. This has addressed the noted transport and distance bottlenecks in Maternal and neonatal health (MNH) referral system.

Smart Wise Afya(Health) Generation (SWAG)

SWAG IS youth targeted interactive engagement effort that builds on the idea of youth attitude, or "swag". The acronym for Smart Wise Afya (Health) Generation.

The initiative builds on a youth microculture of defiance to build social acceptance for low-risk sexual behavior. It has helped young people to celebrate pacticing abstinence, using condoms, being faithful, seeking prompt health services and shunning stigmatizing behaviour.

Lea Mimba Pregnancy clubs

(A Group Based Model for Antenatal Care in Kakamega County, Kenya)

Pregnancy and childbirth can be a stressful, isolating, and often dangerous time for women and their newborns. Kakamega County in western Kenya has high levels of maternal deaths and lower than average coverage of essential maternal and newborn health services, including antenatal care (ANC). Only 45% of women receive at least four antenatal visits, and slightly less than half (47%) deliver with a skilled birth attendant compared to the national average of 61%. Women, and in particular adolescents, face a range of barriers when accessing care during pregnancy, including negative attitudes of clinic staff, long waiting times, and costs for services and transportation.

In addition, the traditional one-on-one ANC model does not meet women's needs for counseling and support and for social connections with other women.

Management Sciences for Health (MSH), in partnership with the Kakamega County health management team (CHMT) and the Kenya Progressive Nurses Association (KPNA), implemented an innovative service delivery model for ANC that is more responsive to women's needs for social support without overburdening health care providers. Lea Mimba that brought women at similar stages of pregnancy together with a health provider.

They shared experiences, learnt essential health information and self-care practices, supported each other socially and emotionally, and developed a sense of community. Women met over the course of their pregnancy (seven visits) with the same women and health provider.