

KISUMU COUNTY





Nairobi, August 2022

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KISUMU COUNTY INNOVATIONS REPORT [Innovations in Healthcare: Trans- Nzoia 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 '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).

The document was developed by Paul Waswa, Dan Makuba and Francis Wafula, with input from the broader Open Phences team that includes Noelle Orata, Elizabeth Gitau, Muriithi Njogu, Brenda Bunyasi, Annette Murunga, Cornelius Kiptoo, Irene Khayoni, Eric Tama, Peter Nguhiu and Lyndon Marani. Funding was provided by the Open Phences Hub.

Paul Waswa
Project Lead Analyst

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).

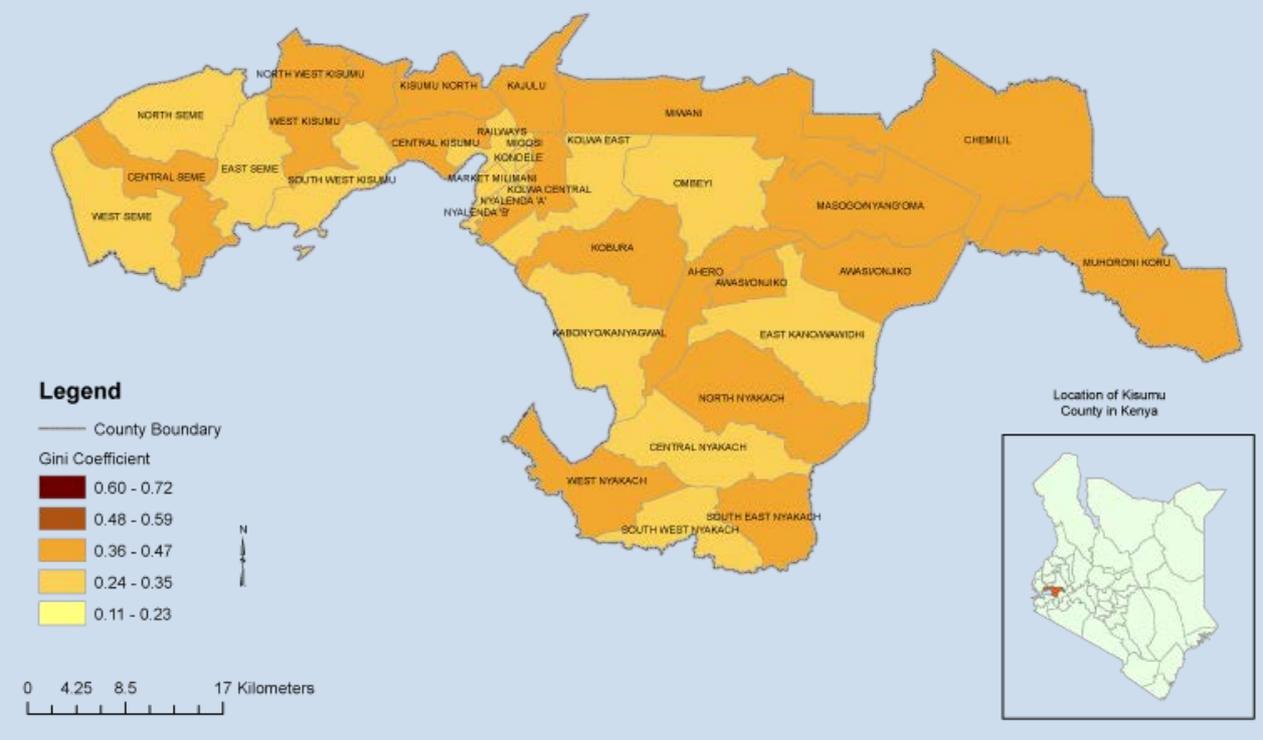
Child Immunization (Fully Immunized) - This is the proportion of fully immunized children from 0 to 59 months.

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

COUNTY INFORMATION

Overview

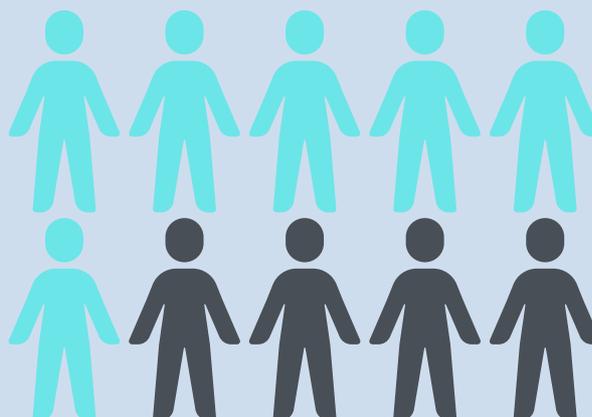
Kisumu County lies between longitudes 33° 20' E and 35° 20' E and latitude 0° 20' South and 0° 50' South. The County is bordered by Homa Bay County to the South, Nandi County to the North East, Kericho County to the East, Vihiga County to the North West, Siaya County to the West and surrounded by the second largest freshwater lake in the World; Lake Victoria. Kisumu County covers approximately 567 square kilometres on water and 2086 square kilometres land area, representing 0.36% of the total land area of Kenya's 580,367 square kilometres .



Demographic features

The 2019 Kenya Population and housing census enumerated a total 1,155,574 persons. Of this, 560,942 were male and 594,609 were female. The county has a population density of 554 persons per square kilometre.

The major economic activities of the residents are trade, farming and fishing



OTHER FEATURES

FEATURE	ESTIMATE
Gini coefficient	40.5
Age dependency ratio	82.9
Old age dependency ratio	5.7
Child dependency ratio	77.1
Rural Access Index - %	90
Population owning mobile phones (%)	49.4
Population accessing internet (%)	20.5

Healthcare Information

Health Infrastructure

The Kisumu 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. Kisumu has put a strong focus on community strategy. The community health units are supported by community health volunteers who form the link to the health facilities. Kisumu county has a total of 197 community units, 145 public facilities, 151 private for profit, 19 private not for profit and 28 NGO facilities.

Health Workforce

The core health worker density per 10,000 of the population stands at 23 against the national average of 15.6. The health provider to population ratio is 1: 44,634 for doctors and nurse to population ratio is 1: 2,383 against the recommended WHO standard doctor or nurse population ratio of 1: 435 (CIDP 2018-2022).

HEALTH OUTCOMES

INDICATOR	OUTCOME	YEAR
Child immunization(%)	96	2019
people living with HIV	144,303	2019
Delivery at health facility(%)	94.5	2019
Total fertility rate	3.2	2019
Infant mortality rate	39.1	2019
Under-5 mortality rate	63.1	2019
Maternal mortality rate	343/100,000	2019
Households accessing safe drinking water (%)	72.9	2019
Health insurance coverage(%)	27.1	2015/2016

Tech-innovations

DRONE TECHNOLOGY

The Need

In Kenya and even the world at large, access to life-saving and critical health products for billions of people is hampered by the last mile problem; inability to deliver needed medicines and vaccines due to lack of adequate transportation, communication or supply chain infrastructure.

The innovation

To increase access and reduce wastage, key stock of blood products, vaccines and lifesaving medications are stored at Zipline's distribution centers for just in time delivery. Health workers place orders by text message or call and promptly receive their deliveries exactly when and where they need them in 30 minutes on average. Deliveries are made by use of drones.



Damu Sasa



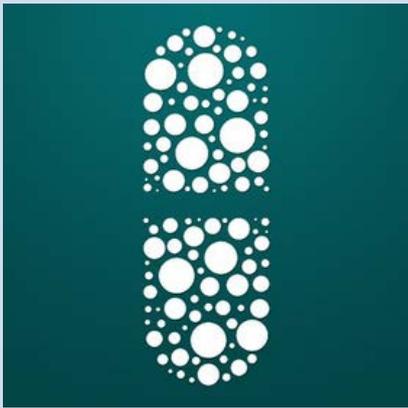
The Need

Unstructured appeals for blood and slow response due to lack of real time data on blood levels and where to get blood, coupled by poor coordination and collaboration among key players in the blood service ecosystem.

The Innovation

Damu-sasa is an innovative end-to-end blood services information system. It supports blood sourcing, inventory management, transfusion management and even haemovigilance and stakeholder collaboration. It came through the Presidential Digital Talent Programme where it grew in both vision and mission. Currently its operation is in 37 counties.

Through a partnership with technology solutions firm Advanced IT solutions (AISL) Amref Health Africa in Kenya is supporting to scale-up Damu Sasa in hospitals across the country towards the realization of universal health coverage.



Maisha Meds

Provider of supply chain and inventory management software

Provider of supply chain and inventory management software. The company offers an Android-based platform that assists providers to streamline their business. The features in the platform include inventory management, record and track sales, analyze finance, and generate reports. The company provides a point of sale management tools for pharmacies and digital reimbursement tools for marketing. The users are assisted with sales, inventory, quality management, and other supply chain solutions

“GROUND ZERO” – MOBILE PHONE TECHNOLOGY FOR RAPID HOUSEHOLD LEVEL DIARRHOEA REPORTING FOR COMMUNITY DIRECTED INTERVENTION INITIATIVES

Kenya’s Ministry of Health and Sanitation major concern is the management of diarrhea; the third most common cause of mortality/morbidity in the country, with a case fatality of up to 21%. The innovation implemented a mobile phone platform to gather daily diarrhea information at household level and relay it to community health workers for intervention. “Cohesion,” a homegrown mobile phone application, simple smart phones and “Simprints” portable biometric scanners collect and collate household level daily diarrhea information. This project targeted vulnerable populations, particularly pregnant women and children under 5 years old.

Triggerise

The Need

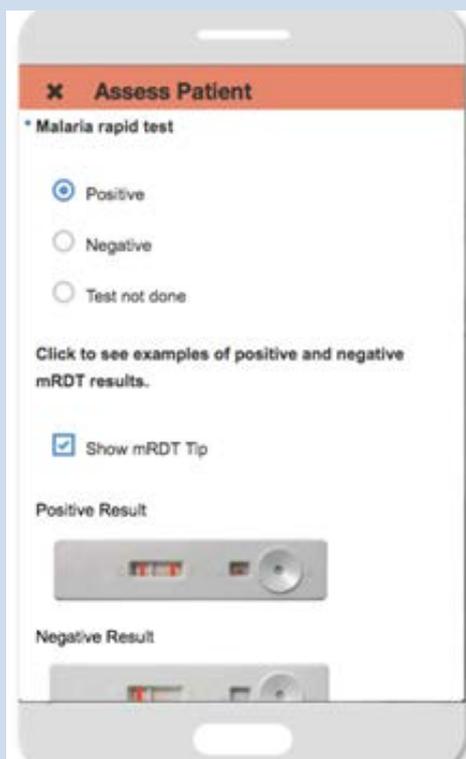
Our health ecosystem is diverse, and there was need to have a platform through which each player within the health ecosystem can be identified with what they do.

The Innovation

They connect across supply and demand, building an ecosystem of partners, local services and communities to deliver joined-up health services on the ground. The platforms connect the members' needs to existing local providers, by building ecosystems of local health services, community organizations and micro-entrepreneurs using tools such as reminders, follow-ups, subsidies and instant rewards to motivate members. Currently connection is primarily adolescent girls and young mothers to a variety of sexual and reproductive health services and Antenatal care from local providers.



Smart health application



The Need

Often lack of accountability impedes effective health delivery. The vast majority of health data in Africa is still collected on paper in a process that is both slow and notoriously unreliable.

The Innovation

In partnership with Medic Mobile, Living Goods developed the smart health app that uses a basic clinical decision support system to ensure consistent and accurate diagnoses and smart workflows for pregnancy care, childhood diseases, nutrition, family planning and immunization tracking. The app also allows CHWs to collect data that is compatible and integrated with government DHIS2

ZiDi

Organization: Microclinic technologies



The Need

Rural clinics provide over 80% of healthcare in Kenya. However, most clinics operate at 25% capacity or less, due to poor management of patient volume. Without reliable means to track the inventory or quality of medicine, clinics also face supply shortages and are at a greater risk of selling counterfeit medicine.

The innovation

Microclinic technologies ZiDi application enables clinics and hospitals to improve the efficiency of health services by improving monitoring and evaluation of patient care, medicines and personnel. Offered as a prepaid service, ZiDi includes an electronic medical record system and real time drug dispensing tracking. Patient encounters, collected revenues, and drug inventories are all tracked through the application. Reports on staff productivity, financial data and service utilization rates can also be created to reduce administrative costs. MicroClinic technologies provides technical assistance.

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 them 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.



Totohealth



Innovative Solution

Totohealth utilizes SMS and voice technology to help reduce maternal mortality, child mortality and detect developmental abnormalities in early stages. It enables organizations and counties to register parents and start receiving Totohealth timely text messages, schedule and send reminders, appointments, surveys and announcements to parents in a convenient and affordable way.

Totohealth is also delivering "The World Starts with me" sexual and reproductive health and rights (SRHR) information via SMS text messages to students and teachers at secondary schools in Kenya. The SMS platform allows for two-way communication, permitting students and teachers to receive accurate, confidential and non-judgmental answers within 24 hours.

The need

In the context of Kenya, 1/3 of the youth under 15 years have had sexual intercourse, access to accurate SRHR information is scarce, cultural and societal sexual discourse is conservative.

Addressing the RMNCAH Need

- Receiving timely, educative SMS on nutrition, breastfeeding, child development, vaccination and family planning
- Tracking the child's vaccination schedule and get reminders on prenatal and post-natal clinic visit
- Using Totohealth messages to track the child's/pregnancy's development and get alert notifications in case of any abnormalities.
- Clients receiving timely referrals to facilities near in case of health complications

Non-tech Innovations

EVERY SECOND MATTERS FOR MOTHERS AND BABIES-UTERINE BALLOON TAMPONADE (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.



I-Care Program



The Need

Girls in rural areas and slums don't have money for sanitary towels. Instead of sanitary towels they use rags or sand and leaves. They are embarrassed about this and stay home from school, missing 3-5 school days each month.

The innovation

Afri-can, together with Kenyan Industrial Research Development institute (KIRDI) developed washable sanitary towels under the name I-Care . Kenyan girls can buy these sanitary towels at a low price so that they can still go to school when they have their monthly periods. They use saleswomen that go door-to-door providing the product and delivering messages on menstrual hygiene and family planning

Healthcare Financing Innovations

Changamka microhealth limited

The Need

In Kenya, 90% of the population lack access to health insurance, most cannot afford existing insurance packages. As a result, families go without critical health services or are thrown into a cycle of poverty by crippling out of pocket health costs.

The Innovation

Changamka offers three products that allows Kenyans to save over time for healthcare. With smartcards for maternal healthcare and family healthcare, customers can use M-Pesa to transfer their money via cell phone into a dedicated savings account and then use the account to pay for care when needed



Carepay



The Innovation

Through a partnership with Safaricom, PharmAccess, National health insurance scheme in Kenya, Carepay developed M-TIBA, which directs health funds from the public and private funders directly to patients on their mobile fund. These funds are restricted to conditional spending at selected healthcare providers, which helps to address the issue of fraud.

The Need

Because Kenya faces a low insurance penetration due to various reasons, people are forced to pay large out-of-pocket rates for services at facilities

Marwa Care

County Government of Kisumu in collaboration with PharmAccess and NHIF



The Need

The end of the National UHC pilot left many to grapple with unknown future, since many depended on the program to cater for their medical bills for 3 years. However, once again they found themselves having out of pocket expenditures on matters health.

The Innovation

The MARWA Solidarity Health Cover is facilitated through a partnership between Kisumu County Government as administrator, PharmAccess as a technical advisor to Kisumu County and NHIF as the insurer. The object is to include all citizens of Kisumu County and subsidize indigents living in Kisumu County to be able to access healthcare through medical insurance cover using the M-TIBA platform.