

# ISIOLO COUNTY

COUNTY INNOVATIONS





Nairobi, August 2022

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ISIOLO COUNTY INNOVATIONS REPORT [Innovations in Healthcare: ISIOLO County]

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Suggested citation: Open Phences (2022). Innovations in Healthcare: Isiolo County. Open Phences Hub. Nairobi. Kenya

## 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.

**Human Development Index** - The human development index (HDI) is a summary measure of assessing progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living.

**The Gender Inequality Index (GII)** - reflects inequality in achievements between men and women in reproductive health, empowerment and labour market - the higher it is the more severe the inequalities are.

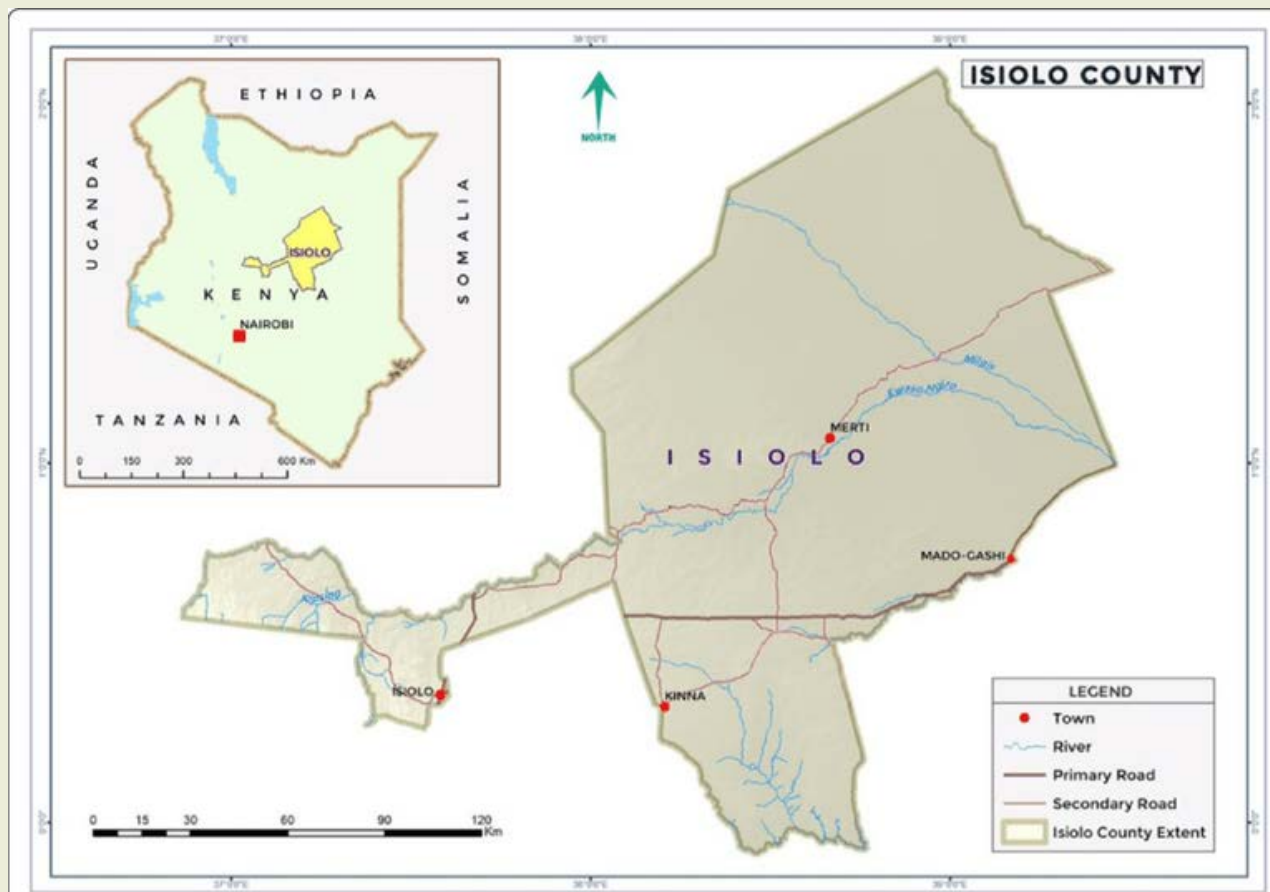
**Rural Access Index** - Measures the proportion of the rural population that can access an all-weather road within two kilometres.

# County Information

## Overview

Isiolo County borders Marsabit County to the north, Samburu and Laikipia Counties to the west, Garissa County to the south east, Wajir County to the north east, Tana River and Kitui Counties to the south and Meru and Tharaka Nithi Counties to the south west. It covers an area of approximately 25,700 km<sup>2</sup>. It is located between Longitudes 36° 50" and 39° 50" east and latitude 0° 05" south and 20° north. Isiolo town lies 285 kilometres north of Nairobi, the capital city of Kenya by road.

The County has two constituencies, three sub-counties and ten wards.



# Demographic features

The county has a total population of 268,002 persons. Out of which 139,510 are male and 128,483 females. The county has a population density of 11 persons per square kilometre.

s. The county boast of abundant land, tourist attraction sites and minerals which are held dear by the residents as major economic resources. Livestock production remains the biggest economic activity with approximately 80% of the population relying on it. The county has its fare share of natural wealth being endowed with three national game reserves namely, Shaba, Buffalo Springs and Bisanadi.

## OTHER FEATURES

FEATURE	ESTIMATE
Gini coefficient	35.2
Age dependency ratio	93.2
Old age dependency ratio	6.8
Child dependency ratio	86.5
Gender Inequality Index	0.45
Rural Access Index - %	36
Population owning mobile phones (%)	38.2
Population accessing internet (%)	9

# Health Information

## Health Infrastructure

The 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 62 level II facilities, 10 level III facilities, 5 level IV facilities with no level V and level VI facilities. These facilities are distributed across Public, private for profit, private not for profit and NGO facilities. The county has 36 established community health units.

The County health system is largely affected by competing challenges not meeting the standard number in any of the orientation area as per the health systems building blocks. Specifically, the indigenous cultural practices encourage high birth orders, early marriage, teenage pregnancy, cultural barriers like female-genital mutilation; have contributed to the high maternal and neonatal mortality. Over 68 percent of people in the county live in the rural areas where health facilities are inadequate, sparsely distributed and understaffed (CIDP 2018-2022).

## Health personnel

The doctor: population ratio for the county is about 1:5000, nurse: population ratio 1:1500.

The health worker density of the county is at per 10,000 population.

## Morbidity

The five most common prevalent diseases in the general population are: Upper Respiratory Tract Infections, Malaria, Pneumonia, Otitis Media and Gastroenteritis in order of prevalence.

## HEALTH OUTCOMES

INDICATOR	COUNTY OUTCOME
Child immunization(%)	91
people living with HIV	3,616
Delivery at health facility(%)	70.7
Total fertility rate	3.3
Infant mortality rate	35.1
Under-5 mortality rate	56.6
Maternal mortality rate	451/100,000
Households accessing safe drinking water (%)	65.1
Health insurance coverage(%)	7.7



# Tech-Innovations

## Living Goods



## 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



# Ministry of health Telemedicine pilot

The Ministry of health vision is hinged on the realization of "a healthy, productive and globally competitive nation. However, this is not possible to achieve when some parts of the country lack the requisite medical personnel, especially in rural areas.

Telemedicine has great potential to overcome geographical barriers and increase access to healthcare services. The government of Kenya has rolled out a telemedicine programme to improve access to healthcare, particularly in remote and marginalised regions. Piloting of the programme was conducted at the Kenyatta National and Isiolo Hospitals.



# Non-Tech Innovations

## Camel Ambulances/Camel Outreaches



Geographic limitations have long hindered efforts by the Kenyan government to provide health services to people in remote areas.

To mitigate this, a non-governmental organization known as Communities Health Africa Trust (CHAT) has stepped in helping to transport medication to remote areas of need using camels. The main mission is to assist vulnerable communities to access much needed medication.

The common services offered include family planning, HIV/AIDS related services, sex education, and also treats diseases such as malaria and diarrhoea.

## Beyond Zero mobile clinics

Mobile clinics play a critical role in delivery of a wide range of low-cost health care services especially in hard-to-reach areas. Mobile clinics respond to unmet health needs of vulnerable populations and link these populations to the wider health system, therefore strengthening the capacity of existing health systems.

Beyond Zero identified mobile clinics as an innovative approach to reach marginalized communities with maternal and child health services and donated at least one mobile clinic to all the 47 counties in Kenya. The mobile clinics routinely provide a myriad of free services and health education messages.



## FAMILY MID-UPPER ARM CIRCUMFERENCE (MUAC) TAPE

MUAC tapes are predominately used to measure the upper arm circumference of children but also that of pregnant women, helping to identify malnutrition. All are graduated in millimeters and some are colour coded (red, yellow and green) to indicate the nutritional status of a child or adult.



MUAC less than 110mm (11.0cm), RED COLOUR, indicates Severe Acute Malnutrition (SAM). The child should be immediately referred for treatment.

MUAC of between 110mm (11.0cm) and 125mm (12.5cm), RED COLOUR (3-colour Tape) or ORANGE COLOUR (4-colour Tape), indicates Moderate Acute Malnutrition (MAM). The child should be immediately referred for supplementation.

MUAC of between 125mm (12.5cm) and 135mm (13.5cm), YELLOW COLOUR, indicates that the child is at risk for acute malnutrition and should be counselled and followed-up for Growth Promotion and Monitoring (GPM).

MUAC over 135mm (13.5cm), GREEN COLOUR, indicates that the child is well nourished.

Comparative studies have shown that MUAC is subject to fewer errors than Weight-for-Height.

## 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.



# Christian Aid Initiatives

## The Mother Referral System

Isiolo County ranks number 14 out of 47 Kenyan counties in maternal mortality burden. For every 100,000 live births, 451 mothers lose their lives (county fact sheet 2019).

The main drivers behind the persistently high maternal mortality rates has been the continued use of unskilled traditional birth attendants (TBAs) as a result of entrenched cultural practices spanning many generations. The long distances pregnant mothers need to travel to reach the nearest health facility has exacerbated the use of traditional birth attendants.

The Christian Aid project identified and targeted 249 traditional birth attendants who previously helped women give birth at home. Through training, the women have been supported to change their roles – rather than helping pregnant mothers give birth at home, they instead accompany them to give birth at a health facility, under the assistance of a skilled health worker.



## Mother-to-mother support groups

The mother-to-mother model promotes a peer support system that empowers and enables the women to stay focused on their business, expand their capital base and, in turn, motivate more women to join to group.



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# SASA activists



Deeply embedded cultural practices pose a big obstacle to women accessing maternal and neonatal health services, and disempower women's ability to make the right health choices. Girls as young as 13 are usually exposed to practices such as early marriage, sexual and gender-based violence, FGM and beading (a tradition in which girls are 'booked' or engaged to older men for sexual purposes).

Christian Aid and its partner Centre for Rights Education and Awareness (CREAW), with funding from the UK Aid Match (UKAM) project in Isiolo, trained a special group of visible, vocal women to advocate for a shift away from cultural practices that endanger women's maternal health. SASA activists refers to a community-based approach of sensitizing and mobilizing young women to ensure they are protected and educated.

The SASA activists travel to communities to advocate for better rights for women, and teach community members about the dangers women and girls face when harmful cultural practices are followed. They also visit schools, water points and other areas where young girls are regularly found: their aim is to create an open space for girls to discuss the issues that affect them.

