



In Search of Better Health

Press Release

Pleased Bill Gates Pledges to Continue Funding Research at KEMRI

NAIROBI, Date: Thursday, 17th, November 2022: American business magnet and philanthropist, Mr. Bill Gates has visited the Kenya Medical Research Institute (KEMRI) and held discussions with some of the country's leading research scientists and innovators.

During his three-hours visit at Headquarters on Wednesday, 16th November 2022, Mr. Gates, the Founder of the multinational technology corporation, Microsoft Corporation had a brief consultative meeting with Director General Prof. Sam Kariuki and members of the top management.

KEMRI is one of the recipient of collaborative research funding from The Gates Foundation for close to two decades that has resulted in cutting-edge and impactful research findings of global influence to health policies and bettered health systems.

During his visit, Mr. Gates was taken through a number of research projects on Maternal and Child Health including the Child Health and Mortality Prevention Surveillance (CHAMPS), Pregnancy Risk Surveillance Innovation and Measurement Alliance (PRiSMA) and Childhood Acute Illness and Nutrition Network (CHAIN) which are collaborative projects between KEMRI, Ministry of Health and Centre for Disease Research (CDC), Phillips Kenya, the University of Washington, Wellcome Trust and University of Oxford respectively.

Bill Gates joined a meeting to review the process and results of the CHAMPS and PRiSMA projects being implemented in Western Kenya region of the Kenya.

Below is some context on CHAMPS and PRiSMA studies:

1. **CHAMPS**: CHAMPS aims to develop a long-term network of high-quality sites to collect robust and standardized longitudinal data with the overarching objective of understanding and tracking the preventable causes of childhood death globally.

2. **PRiSMA:** PRiSMA on the other hand is a longitudinal study of maternal and newborn health, with an emphasis on the pregnancy risk factors and their associations with adverse pregnancy outcomes.
3. **CHAIN:** CHAIN is a Network of clinical, laboratory, social science and policy researchers who aim to reduce mortality among children being treated for acute illness. With funding from the Bill & Melinda Gates Foundation (BMGF), we established partnerships across Africa and South Asia and a headquarters in Nairobi. CHAIN is the first of the large BMGF-funded to be coordinated outside the USA.

The first main activity was an international cohort study to examine clinical and social risks and pathways defining mortality risks among young children admitted to hospital and treated according to current guidelines to identify what new interventions may be needed. Sites were selected to encompass a broad range of settings, populations, hospital types and prevalence of HIV and malaria:

- Kenya (3): Mbagathi County Hospital, Migori County Hospital and Kilifi County Hospital
- Bangladesh (2): Dhaka Hospital and Matlab Hospital
- Uganda (1): Mulago Hospital, Kampala
- Malawi (1): Queen Elizabeth Central Hospital, Blantyre
- Pakistan (1): Civil Hospital, Karachi
- Burkina Faso (1): Banfora Regional Hospital

Besides running three sites, the Kenya CHAIN team undertook negotiations with external sites, training, monitored sites, data management and monetary management. The team conducted the main epidemiological, social science and laboratory analyses (KEMRI-UW, KEMRI-WTRP, CMR, CCR) for the cohort.

CHAIN cohort and social science papers have been published: <https://chainnetwork.org/research/>. Main findings were that i) current care guidelines do not address differences in mortality risk among children; and ii) nearly half the deaths in admitted children occurred after discharge. Following the CHAIN results, the WHO has set up a risk stratification working group.

We are now working on:

- A systems biology study to understand biological pathways that could be targeted to prevent mortality, including the microbiome, metabolome, proteome, antimicrobial resistance, systemic inflammation and intestinal function.
- A clinical trial (PB-SAM) of treatment for sick severely malnourished children
- Developing tools and trials for risk-based care, guidelines for appropriate discharge, and post-discharge interventions to vulnerable mothers and young children.

Microbiome work in CHAIN has made a substantial contribution to the development of an upcoming probiotic product trial involving *Bifidobacterium infantis* for underweight sponsored by the Gates Medical Research Institute. Dr James Njunge, a postdoctoral scientist

in Kilifi presented this work along with Dr Benson Singa who presented the clinical aspects of such a trial in Kenya.

Please click here for photos and video clips of the visit:

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