

Title:

**THE STATUS OF TROPICAL AND INFECTIOUS
DISEASE RESEARCH IN KENYA**

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- Theme: Integrating Infections Prevention and Control (IPC) in Healthcare Programs

Introduction

- Theme highlights the need to have status of tropical and infectious diseases research in Kenya addressed.
- To endear generations of new knowledge, skills and attitudes through research and innovation and, the need to integrate Infection Prevention and Control (IPC) in healthcare programs.
- To include such diseases as Tungaisis (jiggers) as tropical and infectious diseases within the domains of healthcare provision .

- Tropical and Infectious disease remain the most important cause of morbidity and mortality.
- In resource poor countries, 85% of years lost to disability and deaths are due to these infections.

- Neglected Tropical Diseases (NTD) are among the most common infections in the world's most impoverished individuals
- Lead to chronic disability, complications in pregnancy and ultimately loss of worker productivity.

Survey at the KNH and UoN shows of 2424 proposals, 87% basic science, 10% applied science and 3% in between. NONE on TID and majority were student dissertations and the rest projects related.

NONE related to regional or Kenya, policy or development agenda.

Kiprono S.R. et al. wrote 'As a country the jigger menace is frustrating Kenya's attempt to achieve the Millennium Development Goal on poverty reduction by the year 2015 as well as reducing the pace of national development.'

- **Malaria:**
- Endemic in 100 mostly tropical countries, majority of 1.5 – 2.5 million annual deaths occurring in sub-Saharan Africa.

- **African trypanosomiasis:**
- Endemic in 36 countries of the sub-Saharan Africa.

- **Leishmaniasis**
- Endemic in 88 countries.
- **Schistosomiasis:** Endemic in 74 countries 80% live in sub-Saharan Africa (Source CIA World Fact book Feb 21 2013)

Research progress in NTDs lagging behind despite:- the burden of disease,

-available treatments many are not well tolerated

-affected have; limited access to existing treatment, rapid reinfection and drug resistance

Parasites have

- Complex pathogen life cycles that are laborious and often expensive to maintain in the laboratory.
- Limited molecular tools for genetic manipulation and analysis on a genome in wide scale.
- Limited animal models of infection that mimic the human disease

Requirements:

- Supports for basic science and applied research science to best understand, treat and ultimately prevent infectious disease.

Why research?

- Identify Diagnostic and Biomarkers
- Identify infected people for treatment,
- Conduct surveillance of treatment effectively outcome in drug and vaccine efficacy trials.
- Establish databases resources.
- Enable production of Reagent/ materials resources
- Development of new or better drugs.
- Vaccine Development:

Basic Research Issues

- Basic concept involves common methodologies for genetic manipulations.

Developing Research Leaders

- **Informing statement**
- Research as a platform for development in Africa is currently not eminent yet there is an urgent need to appropriately react to the deepening health crisis in Africa.
- The continent bears 25% of the world's 'burden' of disease, has only 3% of the world's health workers and 1% of global health expenditure.
- Need to address issues of quality, quantity, equity and relevance of populations' health needs
- Health spending in Africa is woefully inadequate, lack of grant funding and research infrastructure make it difficult to retain and attract talented African scientists.

- African nationals are currently under represented as leaders in medical research in the world. A Transformative approach of Scaling up of health professional competencies in health.
- Research is one of the tools that is to be used to achieve the transformation.

Scaling up competencies for health research

- Aims: to strengthen the capability of health related professionals and institutions to conduct relevant research.
- that will, inform policy, change practice and retain competencies and skills for development.

Strengthening of Health systems

- Research should take more wholesome approach to health by focusing on the different components needed to deliver effective health care.

Advocacy for Research

- Research should sets out to influence those in power so that health policies, practices and financing better serve the needs of the larger proportion of the population.
- Research provides evidence- based knowledge that can; inform, influence and used in advocacy for change.

Researchers development paths

- PRIME-K is initiating the development of capacity to perform research through three projects;
Career development,
Implementation Science fellowship
and seed mentored projects with the purpose of building research health care provision research leadership.
- **End points**
to catalyze significant advances to link implementation of research output, undertake, manage and evaluate research.

Expectations

- **Expectations**

Link outputs from research and training directly to health care delivery.

- Provide integrated research competencies for the training that achieves specific competence in TID /NTD
- Strengthen health research skills in a manner that enables institutions and national government to sustain research in TID/NTD
- Increase the knowledge available for research planning through rigorous operations and implementation of research outputs.
- Reducing brain drain to other research settings outside Africa while contributing to retention of staff.

Conclusion

- There is palpable lack of research despite the large number of people who die of these diseases every year.
- Efforts in malaria, TB, and HIV are providing an infrastructure that overlaps geographically with endemic areas for many of the infectious diseases, creating prospects for shared research capabilities and opportunities.
- The current methodological approaches such as genomics, proteomics, synthetic chemistry, molecular and genetic epidemiology, as well as increase in information and communication , should enhance prospects for research in many of these infectious diseases.