



World Neglected Tropical Diseases Day 2023

ACT NOW! ACT TOGETHER! INVEST IN NEGLECTED TROPICAL DISEASES

A close-up photograph of a mosquito on human skin, showing its legs, wings, and proboscis. The background is a soft, out-of-focus green and brown.

 Ryculture YouTH Voices

 Ryculture Ltd.

World Neglected Tropical Diseases Day

Act Now

Act Together

Invest in Neglected Tropical Diseases

Acknowledgement

We acknowledge the contribution of and support of stakeholders through concerted efforts towards the eradication of Neglected Tropical Diseases (NTDs) across the globe.

We also do acknowledge that these efforts have not delivered on the mission with much more work to be done. By hosting this workshop to commemorate World NTDs Day 2023, we aspired to create awareness among the youth to take lead towards NTDs elimination, share insights on how this can be achieved and set stage for the future of our collaborations.

On this account we acknowledge the contributions of our facilitators for the day:



Dr. Nancy Kinyatta:

A Senior Research Scientists at the Kenya Medical Research Institute (KEMRI) based at the Center for Biotechnology Research and Development. She holds a PhD degree in Applied Parasitology from the University of Nairobi, department of Biology. Nancy has specialized in Medical Parasitology, Entomology and Molecular Biology. She has vast experience in epidemiological surveillance of Lymphatic filariasis. She is also involved in Stem cell research in the Institute.



Dr. Odhiambo David:

A Pharmacist committed to improving access to quality healthcare services and promoting human capital development towards healthy and prosperous societies. He is the co-founder, Ryculture Health and Social Innovation and curator, African Pharmaceutical Network with focus on supporting socio-economic development in the healthcare & pharmaceutical industry through knowledge sharing, best practice modeling and policy shaping engagements.

Executive Summary

Neglected Tropical Diseases (NTDs) day is marked every 30th January as a call to action to end neglected tropical diseases¹. These are a set of 20 different conditions as identified by WHO that occur mostly in tropical and subtropical regions and affect the poor and vulnerable. They are termed as neglected due to fewer considerations in funding for research and development particularly in the pharma industry².

In response to the effects of NTDs and strategies to combat them across the world by 2030, WHO released a roadmap that is based on fundamental pillars meant to support global efforts to control, eliminate and eradicate NTDs. These pillars are geared towards ending the neglect to realize Sustainable Development Goals and they include³:

- accelerating programmatic action to reduce prevalence,
- morbidity and death, intensify cross-cutting approaches and
- changing operating models and culture to facilitate country ownership.

Neglected tropical diseases being one of our major advocacy focus areas, Ryculture Health and Social Innovation through its YouTH Champions Network hosted a virtual workshop to commemorate World NTDs Day 2023 to create awareness on NTDs, their burden and to equip young healthcare professionals with skills on how to tackle the burden of NTDs. The virtual workshop was held on 1st February with a major focus on Lymphatic Filariasis (LF) and Visceral Leishmaniasis (VL).

The objectives of the workshop were to:

1. To create awareness on NTDs and the burden of NTDs in Africa
2. To equip young healthcare professionals with skills needed to tackle NTDs at the community level.
3. To encourage concerted efforts among young people towards eradication of NTDs.

This report captures the presentations as highlighted during the workshop. A comprehensive review can be accessed through our YouTube channel [here](#).

Discussion

The discussions featured a presentation on the burden and case of lymphatic filariasis in Kenya by Dr. Nancy Kinyatta. This was followed by a case presentation based off Dr. Odhaimbo's internship experience at Kenyatta National Hospital (KNH) on Visceral Leishmaniasis.

The Burden of NTDs in Africa/Kenya: Lymphatic filariasis

Neglected Tropical Diseases are a group of chronic infections (e.g., trachoma, schistosomiasis, lymphatic filariasis) affecting 1.7 billion people worldwide in tropical and subtropical areas affecting mostly poor and

¹ World NTD Day. <https://worldntdday.org/>

² Neglected tropical diseases. https://dndi.org/diseases/neglected-tropical-diseases/?gclid=CjwKCAiA_6yFBhBNEiwAkmXy57dcOmDozraex6rOfItK8dVzpWkE-Ion4_egrx6UUitcfO2hKKZzxoCv-QQAvD_BwE

³ Control of Neglected Tropical Diseases. <https://www.who.int/teams/control-of-neglected-tropical-diseases>

vulnerable people. They are termed neglected because they receive less funding considerations in research and development despite affecting a number of people.

Lymphatic Filariasis is an NTD caused by nematode filarial worms including *Wuchereria bancrofti* (causes 90% of L.F infections), *Brugia malayi* and *Brugia timori*. They are transmitted by various mosquito species including Anopheles, culex, aedes and mansonias species. The parasitic worms cause blockage in the lymphatic system hence interfering with the flow of fluids. The early stages can be treated when detected early.

Epidemiology: Lymphatic filariasis is endemic in sub-Saharan Africa, Southeast Asia, the Indian subcontinent, Pacific Islands, focal areas of Latin America and Caribbean Haiti

Signs and Symptoms: An infection progresses from Asymptomatic in the early stages to symptomatic stages and acute and chronic clinical stages (e.g., hydrocele and lymphedema). The diagnosis can be done by: microscopy, immunological antigen test, molecular assays for detecting DNA, X-rays/Ultrasound.

Treatment and control: The Global Programme to eliminate LF was launched in 2000 but by 2020 majority of the countries had not eliminated LF, hence the new road map by WHO to eliminate LF by 2030. This is to be implemented through the two-pillar strategy:

- Annual Mass Drug Administration (MDA) in endemic countries for 5- 6 years with 65 – 80% coverage. The drugs to be used are Diethylcarbamazine citrate, Albendazole and Ivermectin in 2 or 3 combinations.
- Morbidity management and disability prevention (MMDP) programmes such as psychosocial support and wound care. This also entails integrated vector control and management practice.

Elimination Control in Kenya

Only the coastal region met the WHO criteria as an endemic region for LF after mapping was conducted. However, other regions in the countries have reported cases of LF. National Programme to eliminate LF was then launched in 2002 and MDA has been going on since then annually. This has seen the prevalence drop in some of the coastal regions. From 2018, the hotspots were marked for the 3-drug regime to ensure effective interventions to eliminate LF. However, in Kenya, MMDP interventions have not been well implemented.

Gaps in NTDs Elimination

1. Lack of testing capacity and understanding of diagnosis in local clinics
2. Inadequate information on LF by community members and healthcare providers
3. Lack of implementation of structured services for morbidity management
4. Disease resurgence after elimination/control
5. Difficult in accessing endemic regions

Bridging Gaps in NTDs

1. Inclusion of NTDs under Sustainable Development Goals and Universal Health Coverage presents an opportunity to accelerate progress on elimination.

2. Budgeting for NTDs by MoH. In the financial year 2022/2023, MoH allocated 2.4 billion towards elimination of NTDs with elephantiasis receiving 800million.
3. A boost in research and capacity building and development solutions to improve diagnostics, treatment and management.
4. Community engagement – Increase awareness among communities on NTDs
5. Psychosocial support for those affected by critical stages of LF
6. Well co-ordinated multisectoral approaches to curb NTDs
7. Advocacy leading to policy reforms informed by evidence-based research

Scientific Advancements

There have been in advancements in research and implementation programmes to eliminate NTDs in Kenya. At the community level, awareness has been leveled up. Similarly institutions such as DNDi (Drugs for Neglected Diseases Initiative) seek to bridge the gap in access to traetment for NTDs. Adittionally, there are new and effective diagnostic equipment and treatment that have been developed. An example is moving from immunochrotographic card test kits due to cross reactivity thus producing inaccurate results to filarial test strip.

"We need to move science from the bench to the community where services are needed" - Dr. Nancy Kinyatta

Case Presentation on Visceral Leishmaniasis

Leishmaniasis is a parasitic infection transmitted by sandflies and occurs in three main forms; mucocutaneous leishmaniasis, cutaneous leishmaniasis and visceral leishmaniasis. Cutaneous and visceral leishmaniasis are the most prevalent in Kenya with most incidences reported in arid and semi-arid areas. Leishmaniasis is curable but still causes morbidity and mortality due to low clinical suspension, delayed diagnosis and management and treatment being limited to a few hospitals.

During his internship period, Dr. Odhiambo identified the following problem in management of visceral leishmaniasis.

- High disease burden – 8 children were referred from Mwingi Level IV
- Low suspicion index and limited capacity to respond to the cases – Initial diagnosis for the patients was malaria
- Financial constraints and economic implications to the families

Role of youth

- Be informed to disseminate right information
- Advocacy geared towards policy change
- Communication and awareness to the lay public on NTDs
- Assistance in drug administration during MDAs
- Involvement in research
- Establishment of local networks to address the burden of NTDs such as volunteering during MDA, local legislators

Recommendations

1. Mapping of local community regions to identify high risk areas for public health interventions. Some endemic regions have expanded due to climate change.
2. Creation of awareness on the burden of NTDs management and
3. Prevention through control of vectors i.e., use of treated mosquito nets, insecticide repellants, limited outdoor activities
4. Capacity building for local facilities i.e., provision of tests kits and drug supply and sensitization of healthcare providers, local community elders
5. Vector control through environmental interventions
6. Be informed about the epidemiological patterns of diseases in certain areas to avoid misdiagnosis
7. Multisectoral partnerships