LEAP
LEISHMANIASIS
EAST AFRICA PLATFORM

NEWSLETTER

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Foreword

Dear friends and partners,

At this exciting and pivotal time for the Leishmaniasis East Africa Platform (LEAP), we come together again for the ninth issue of our newsletter.

Earlier this year in Addis Ababa, the World Health Organization (WHO) launched a new framework to eliminate visceral leishmaniasis (VL) in Eastern Africa – marking a significant milestone in our collective efforts to combat VL in the region. This framework presents a unique opportunity for LEAP to leverage the experience, skills, and partnerships we've built over the years to play a central role in the elimination agenda.

One of LEAP's greatest achievements has been fostering south-south collaboration. Before LEAP, efforts to fight leishmaniasis were often fragmented, with countries, partners and hospitals working in isolation. LEAP has united regional stakeholders—ministries of health, universities, research institutions, partners around a shared strategy for tackling VL. We've created a strong network of researchers and professionals, which will be key as we work toward goals like early diagnosis and treatment, integrated vector management, and effective cross-border surveillance. Our ongoing advocacy, social mobilization, and partnerships will continue to be invaluable in these efforts.

However, as we position ourselves within this global framework, we must also face the reality of shrinking resources, especially from key funders. This is a critical turning point for LEAP—a time for innovation. We need to explore new, sustainable funding models to ensure our work continues without interruption. Expanding our partnerships beyond traditional donors is essential, and we must engage with both the public and private sectors—pharmaceutical companies, philanthropic organizations, and local governments—to sustain our progress. Our 20-year track record of groundbreaking research and improved treatments positions us well to attract the support we need.

In this evolving ecosystem, we need to emphasize our capacity to drive impact not only in the fight against leishmaniasis but also in the broader context of strengthening health systems. Our expertise in conducting large-scale, community-based clinical trials, combined with our strong local networks and engagement in endemic areas, makes us an attractive partner for diverse funding streams.

Additionally, with global health challenges increasingly shaped by factors such as climate change and emerging diseases, we can position LEAP as a leader in innovative, adaptable health solutions tailored to vulnerable populations. By demonstrating our resilience and capacity for impact, even in the face of limited resources, we can secure the support needed to continue pushing towards the elimination of leishmaniasis – and beyond.

Our research and development pipeline also holds great promise. As potential treatments from new chemical entities (NCEs) emerge from this pipeline, there is an urgent need to be ready to conduct Phase 3 studies at LEAP sites. We need to build and nurture the skills required to conduct these trials and ensure we are ready to deliver new treatments to the communities that need them most. This means investing in the capacity of our clinical teams, enhancing infrastructure at our trial sites, and ensuring we have the regulatory expertise to navigate the complexities of advanced trials. Collaboration with global regulatory bodies, research institutions, and local health authorities will be essential to making swift progress. By ensuring our readiness, we can help fast-track life-saving treatments for those in need.

Last year, we celebrated 20 years of LEAP—a journey filled with achievements and invaluable lessons. Now, as we push forward toward the goal of eliminating VL as a public health problem, we must draw on the courage, strength, and resilience that have defined our platform. This has always been our mission, and together, we will see it through to completion.

Thank you for your unwavering dedication and support. We look forward to continuing this journey with you.

Simon Bolo

Head of Leishmaniasis Access, DNDi

Professor Ahmed Musa observes a VL patient at the Institute of Endemic Diseases (IEND) at the University of Khartoum in Sudan, while his colleagues look on.

Africa does not want to miss the opportunity to eliminate visceral leishmaniasis: a long-distance race

Among the 17 Sustainable Development Goals (SDGs) launched by the United Nations in 2015, Goal 3.3 explicitly aims to *'end the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases... by 2030'.* Following the 2030 Agenda, WHO published a roadmap for the 20 neglected tropical diseases (NTDs) on its NTD list in January 2021. In the case of visceral leishmaniasis, the goal is unequivocal: to reduce mortality from the current ~5% to below 1%. This is accompanied by a significant secondary objective: an 85% reduction in all global cases. These are not small goals.

In 2005, the governments of India, Bangladesh, and Nepal, with the support of WHO launched the Visceral Leishmaniasis Elimination Programme, aiming to achieve fewer than one case per 10,000 exposed individuals by 2015, thereby eliminating the disease as a public health problem. The term 'elimination as a public health problem' means there is transmission, but the disease ceases to be a health emergency. By December 2023, the three countries had reduced the estimated 200,000 cases in 2006 to 595 reported cases – decreasing the incidence of VL by between 5 to 30 times in more than 99% of districts.

On 31 October 2023, WHO announced that Bangladesh has become the first country to eliminate VL as a public health problem, marking a significant achievement. Between 2012 and 2017, approximately 4,500 lives were saved in the country. Despite the considerable differences between VL in South Asia

Loriwo Kodorok and his family in Sigor, West Pokot, Kenya. Four of his children have had VL.

and VL in Africa, the success of the three South Asian countries serves as an inspiring example.

Currently, Eastern Africa accounts for over 70% of global cases of VL. Although there are only about 20,000 cases reported annually, various challenges—such as wars, famines, and displacement—could suddenly increase the number of affected individuals and associated mortality rates at any moment.

During the COVID-19 lockdown, while preparing the book ***Poverty and Disease: The Debate and Clash of Tropical Diseases***, we conducted a comparative examination of the epidemiology of VL in the Indian subcontinent and Eastern Africa, accompanied by a plan. Orchestrating a disease elimination program is complex and subject to many vicissitudes, but there are two necessary prerequisites: a starting signal, and leadership. The first is a call to action with an easily articulated justification: how long must Africa wait not to lose its opportunity? Who determines that? The second is for influential institutions to embrace the idea and provide a powerful scientific voice, catalyzing action from governments, media, field partners, philanthropic organizations, and some sceptics.

At a regional summit held from 24-27 January 2023, representatives from Chad, Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan, and Uganda defined a VL strategic framework for the region.

To achieve the objectives outlined in its 2030 roadmap for NTDs, WHO is actively promoting initiatives in Africa, beginning with the establishment of plans and guidelines for the management of NTDs from 2023 to 2027, followed by the development of a strategic plan specifically for leishmaniasis. Each affected country is tasked with creating a national plan that ultimately contributes to a regional programme, ensuring that objectives and methods are harmonized.

At a regional summit held from 24-27 January 2023, representatives from Chad, Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan, and Uganda defined a VL strategic framework for the region. Their discussions

> *LEAP carries a significant responsibility at this stage as it is the most experienced organization for operational research in Eastern Africa.*

were distilled in the Nairobi Declaration, with the eight country signatories, later also joined by Djibouti, committing themselves to working towards the goal of eliminating leishmaniasis as a public health problem which is defined as reduction of the case fatality rate due to primary VL to <1%.

The strategic framework for leishmaniasis recognizes the unique challenges in the region, beginning with the need to elevate the Nairobi Declaration to the highest level of government commitment. This requires a formal document signed by representatives from the nine countries, as well as those from the African Union. Governments must take responsibility by co-financing the programme and implementing their respective national plans, thereby driving the initiative.

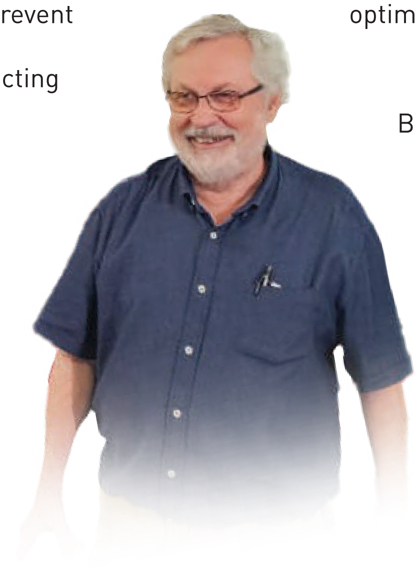
From a technical perspective, it is crucial to establish a regional mechanism for treatment access to prevent stock shortages. Additionally, countries should harmonize epidemiological surveillance by collecting baseline data to evaluate programme progress. It is also necessary to secure major donors' commitment through sustained funding and to encourage scientists to complete essential research to launch the program.

This preparatory phase should transition to an implementation phase in less than two years—specifically, by the end of 2025.

LEAP carries a significant responsibility at this stage as it is the most experienced organization for operational research in Eastern Africa. The strategic framework initiated in January 2023 was endorsed at a meeting in Addis Ababa from 11-13 June 2024, organized by WHO and DNDi.

Those responsible for each country's programme have taken their positions on the starting line on the tartan track, coloured red like African soil, ready for the long-distance race. WHO signalled their support by launching a new framework to address VL in Eastern Africa in June 2024, shifting from reactive control to a preventative approach that eliminates the problem at its root.

It may take time, but success will come if we work tirelessly. The great marathon runner Haile Gebrselassie once told me that what we are doing is truly a long-distance race. The road ahead may be long, but today is a day for optimism.



By

Jorge Alvar

Academic, Royal Academy of Medicine of Spain

Representatives from nine high-burden VL countries in Africa, alongside representatives from WHO, AU, researchers, academia, the private sector, and funding institutions, during the launch of the new framework to eliminate VL in Eastern Africa.

Successful Launch of the Visceral Leishmaniasis Strategic Framework: A New Dawn in Global Health

In a groundbreaking development in the fight against visceral leishmaniasis (VL), governments, health experts, global health leaders, and non-governmental organizations celebrated the successful launch of a comprehensive strategic framework aimed at eliminating this deadly disease. The launch represents a collective push to mitigate the burden of VL, which continues to threaten the world's most vulnerable populations.

The launch event took place during a meeting held in Addis Ababa, Ethiopia, on 11-13 June 2024, with participation from a wide array of stakeholders, including representatives from ministries of health from Chad, Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda, as well as partners, academics, researchers, donors, and the World Health Organization (WHO).

VL, also known as kala-azar, is a deadly neglected tropical disease (NTD) that, if left untreated, causes death in more than 95% of cases. According to WHO, NTDs contribute to the cycle of poverty, trapping communities in a vicious cycle of ill health and socioeconomic disadvantage. VL is endemic in 80 countries worldwide.

In 2022, Eastern Africa reported over 70% of the world's VL cases, with half of those affected being children under 15, according to WHO. Despite significant progress in controlling VL, the disease continues to adapt and thrive, necessitating a more coordinated response.

> “*To achieve elimination, we need strong coordination from ministries of health and partners, commitment from leadership, community awareness, cross-border collaboration, and research…” Prof. Sam Kariuki, Director, DNDi Eastern Africa.*

The newly launched **Strategic framework for the elimination of visceral leishmaniasis as a public health problem in eastern Africa 2023–2030** was developed through a collaboration of key stakeholders following the 2023 Nairobi Declaration, where governments and regional stakeholders committed to eliminating VL as a public health problem by 2030. The framework envisions a world where VL no longer poses a substantial public health risk and outlines five key strategies to support regional efforts for VL elimination: early diagnosis and treatment, integrated vector management, effective disease surveillance, social mobilization, and building partnerships. It also sets out country and regional targets.

This event showcased the collaborative efforts and ongoing commitment of multiple stakeholders, including government officials, health practitioners, and representatives from affected communities. Speakers emphasized that this framework builds upon the successes of previous initiatives and aligns with global goals. The strategic framework is expected to significantly accelerate the WHO roadmap for NTDs 2021-2030, including contributing to achieving global targets and milestones.

Prof. Samuel Kariuki, speaking at the event, called for sustained effort and cooperation to turn the tide against VL. ‘To achieve elimination, we need strong coordination from ministries of health and partners, commitment from leadership, community awareness, cross-border collaboration, and research covering innovation to implementation, focusing on the most vulnerable, including women and children. We must consider the One Health approach since leishmaniasis is one of the climate-sensitive diseases,’ he said.

The unveiling of the framework marks a pivotal moment in public health and in the effort to eliminate VL in Eastern Africa.

By

Joy Malongo

Access Manager, DNDi

Dr. Patrick Sagaki at Amudat Hospital.

Healing ties: Dr. Patrick Sagaki's 20 years of treating Kala-azar in Uganda

In 2004, Patrick Sagaki began working as a medical doctor at Amudat Hospital, never imagining that he would still be there 20 years later. However, his passion for the hospital has grown as his work there.

'I come from Jinja in Central Uganda and studied a Bachelor of Medicine and Surgery at Makerere University in Kampala. I came to Amudat in 2004 as a medical doctor and I now work there as a medical superintendent. In 2008, I was appointed as the acting district health officer. Due to understaffing at the hospital, I also perform clinical work. Additionally, I lead the research team at Amudat Hospital,' said Sagaki.

Amudat Hospital is in Amudat District, Karamoja sub-region, in Northern Uganda. It lies approximately 85 kilometres by road south-east of Moroto, the largest town in the sub-region, and about 400 kilometres by road north-east of Kampala, the capital.

After 20 years of dedicating his life and career to the health facility, no one knows more about the hospital, its history, and its patients than Sagaki. Not only is he well-versed in its current operations, but he also possesses a wealth of knowledge about the history of the hospital originally founded by British missionaries and later taken over by Médecins sans Frontières (MSF).

'Amudat Hospital was started by British missionaries in 1957, and they ran it until 1972 when they handed it over to Karamoja Diocese Church of Uganda, who have been running it to date. But around 1996 or 1997, MSF came in to treat kala-azar – but not only kala-azar. MSF also provided health services for the entire community and managed the hospital. When I came here in 2004, I found them working here,' explained Sagaki.

'MSF built the kala-azar ward, the outpatients department block, and the compound where our DNDi visitors stay when they are here. That whole compound was built by MSF. They also donated a Land Cruiser vehicle to the hospital for ambulance services and

Dr. Patrick Sagaki observing a kala-azar patient at Amudat Hospital with Nurse Priscilla assisting.

provided drugs for other conditions. They upgraded this health facility from a health centre to a hospital. So, they did a great job during their stay here,' said Sagaki.

In 2006, MSF relocated from Amudat Hospital to Kacheliba Hospital in Kenya, where most patients suffering from kala-azar came from, as Sagaki confirmed. The distance between the two locations was over 60 kilometres. During that period, there was a lack of proper management and diagnosis of new kala-azar cases in Amudat. The suspected cases were referred to Kacheliba, Kenya, for diagnosis and treatment. Many patients, already vulnerable, could not afford to cover that distance.

In 2007, the situation improved when DNDi stepped in to fill the gap. They provided training to health workers in Amudat on how to treat kala-azar, and by the end of the year, the kala-azar treatment centre at Amudat was reopened.

Getting Amudat on its feet

The Kala-Azar Treatment Centre has improved its ability to conduct clinical trials to international standards for nearly 15 years since its reopening. The hospital was one of the sites in the multicentre studies for four crucial clinical trials, including the miltefosine dosing study, the miltefosine allometric study, the sodium stibogluconate (SSG) and paromomycin study, and the paromomycin and miltefosine studies.

Besides kala-azar, the facility also treats other diseases, most notably malaria.

'Being located in the tropics, our biggest disease is malaria. Almost 48% of patients in our outpatient department are treated for malaria. And then we have diarrhoea, pneumonia, eye conditions and tuberculosis. In the past when there was insecurity, we used to have a lot of gunshot wounds, but because of the disarmament exercise, that has reduced,' said Dr Sagaki.

Although Amudat is a small health facility, it treats numerous regional patients. As Uganda's sole treatment centre for kala-azar, many patients living with kala-azar come to Amudat for treatment.

'Before, we used to receive an average of ten patients per month. But when we started getting support to go to the active cases, our numbers rose to about 40 patients per month. Most of these patients come from very far, not just Amudat,' said Sagaki.

Sagaki is referring to the support provided by DNDi, which started in 2007. This support included enhancing the facility's capacity to conduct clinical trials. In addition, DNDi facilitated community mobilization activities in Amudat, which involved training village health teams on the kala-azar case definition. This led to increased awareness in the community about kala-azar and more referrals to the hospital.

'This awareness is important because, in most of our patients, the literacy levels are extremely low. They don't know about the disease. So, they first seek traditional management. And by luck, if our community mobilizer reaches them, that's when we can diagnose and give them proper treatment for the disease,' he added.

Sagaki reports that DNDi has provided various forms of community assistance, such as transportation for patients to the hospital, providing meals and bedding for patients at the hospital, and supplying detergents and medicines for co-infections to be used at the hospital.

'Even the doctors we employ, courtesy of DNDi, primarily work on the kala-azar ward, but they even do other things in the hospital. They do caesarean sections for emergency obstetric care and manage other patients, so not exclusively for DNDi.'

When a case of kala-azar is suspected, community leaders are usually the first to make a phone call to the centre as they are already trained in identifying the symptoms. A community mobilizer is then dispatched to the area and screens patients for symptoms such as fever, weight loss, and splenomegaly, which are the defining symptoms of kala-azar. The mobilizer uses a rapid screening test called rK39 to confirm the diagnosis and, if positive, arranges for transportation to a medical facility.

'In villages with high prevalence of kala-azar, it is common to have many patients, sometimes as many as 20 or more, who test positive for the disease. To ensure their timely treatment, we send a vehicle from the hospital to collect them and screen them for other diseases. If a patient tests positive for kala-azar and has not received prior treatment, we initiate treatment immediately,' said Sagaki.

As a first-line treatment, Amudat offers paromomycin and SSG. Patients who show improvement after 17 days will be discharged with a follow-up appointment in three months. They will have a final confirmation appointment after another three months if their condition remains stable.

'For those with persistent symptoms, we do a test of cure. That's when we also do a bone marrow test to see whether they still have parasites. If they have parasites and the levels have not reduced, then we change treatment to second-line treatment,' said Sagaki.

'I'm also happy about the new pipeline of treatments. Our research found that the paromomycin plus miltefosine combination was non-inferior to paromomycin plus SSG. And since we are dropping SSG, which has a lot of side effects, it gives us a chance to get more efficacious and safer medication with the miltefosine plus paromomycin combination,' he added.

Although Sagaki and Amudat Hospital have achieved many successes over the past 20 years, they still encounter some challenges.

'One of our biggest challenges is providing second-line treatment to qualifying patients. Unfortunately, there are frequent shortages of liposomal amphotericin B (LAmB), which WHO has been supporting us with. This often results in long periods of wait time for patients who need it,' Sagaki commented.

Despite the challenges, Sagaki is a grateful doctor. 'I want to inform DNDi that even a child in the Amudat district knows DNDi. They know it because of the good things DNDi has done for this community. I'm so grateful to the DNDi team as they have always been with us,' Sagaki concluded.

By

Linet Otieno

Head of
Communications, DNDi

Researchers at the University of Gondar's Leishmaniasis Treatment and Research Centre, Ethiopia.

The Journey Towards VL Elimination in Africa: My Perspective

The launch of the ***Strategic Framework for the Elimination of Visceral Leishmaniasis (VL) as a Public Health Problem in Eastern Africa 2023-2030*** by the World Health Organization (WHO) in June 2024 marks a significant milestone in the collective effort in the region with the highest incidence of the disease globally. This framework shifts the focus from "disease control mode" to "elimination mode" – establishing specific targets and pillars to guide the initiative.

This journey began in 2020-2021 with a stakeholder assessment conducted by the WHO Special Programme for Research and Training in Tropical Diseases (TDR), the results of which were presented at the 27th Leishmaniasis East Africa Platform (LEAP) meeting in 2022. In January 2023, the Nairobi Declaration was made, showcasing political commitment to eliminating VL and signed by the ministries of health from eight endemic countries, along with relevant partners.

The framework builds on the experience gained in Southeast Asia (India, Nepal, and Bangladesh), which embarked on its elimination quest nearly 20 years ago. This effort culminated in Bangladesh becoming the first country in the world to officially eliminate VL as a public health problem in October 2023.

The global target for the VL elimination strategy aims to reduce case fatality to under 1% by 2030. For Eastern African countries, the regional sub-targets (90/90/100) include a 90% reduction in VL cases – ensuring that 90% of cases are detected and treated within 30 days of symptoms onset; a 100% reduction in child mortality; initiating antiretroviral therapy (ART) for 100% of VL-HIV cases; and detecting, reporting, and managing 100% of post-kala-azar dermal leishmaniasis (PKDL) cases.

The framework for Africa is anchored in five key pillars, two more than those in the Southeast Asia framework: early diagnosis and treatment; vector and reservoir control; effective disease surveillance; social mobilization and partnership building; and operational and implementation research. The elimination process is structured into four phases: planning, attack, consolidation, and maintenance.

While the Strategic Framework serves as a guiding light for VL elimination across nine African countries, important differences in the regional ecosystem require critical analysis. Having worked in this field for the past 20 years, I would like to share my perspective on how we, as Africans, can implement strategies to effectively and efficiently eliminate the disease. Recognizing these regional differences is essential for strengthening cooperation among countries and fostering solidarity to collectively address challenges and develop a robust regional response.

My analysis begins with assessing the preparedness of the five countries we are currently engaged with using the following criteria: the maturity of their disease control programmes, country leadership, the spread or localization of the disease, the availability and skill level of healthcare workers, the number of cases, funding availability, the security situation, and historical successes in eliminating other neglected tropical diseases (NTDs).

In **Uganda**, the national programme has progressively developed over the last 14 years, establishing a focal position for VL. The disease is localized in the Karamoja region, where patient numbers have averaged around 300 annually since 2019. New treatment sites have opened in Matany and Moroto, bringing services closer to patients. Amudat Hospital, the referral site for VL management, supports the training and mentoring of health workers at these new locations. Although the Karamoja region has faced historical insecurity, significant improvements have occurred in recent years since DNDi began operations there. Uganda has successfully eliminated Guinea Worm and human African trypanosomiasis (HAT) caused by ***T.b. gambiense*** and is on track to eliminate onchocerciasis, lymphatic filariasis (LF), and trachoma. The envisioned challenges include cross-border issues with Kenya and little political support. As such, Uganda is likely to be the first country in the region to eliminate VL.

Kenya has significant potential for the rapid elimination of visceral leishmaniasis (VL). The country benefits from a strong control programme, key partners with substantial financial resources, effective government leadership, and the ability to attract both domestic and international funding. However, the disease is widespread across 11 counties, and insufficient control efforts could lead to further spread, exacerbated by climate change. Kenya has already eliminated Guinea worm disease and is on track to eliminate HAT, onchocerciasis, lymphatic filariasis (LF), and trachoma.

In contrast, **Sudan** and **Ethiopia** are significantly affected by ongoing insecurity, which destabilizes all fronts. The highly endemic areas in Tigray and Amhara regions are hardest hit, compounded by a high prevalence of VL-HIV co-infection among migrant workers from highland Ethiopia. Sudan bears a substantial burden of the disease in this region, accounting for 47% of cases in 2022, and has been embroiled in civil conflict that has significantly reversed the gains made over the years in VL control.

South Sudan faces significant challenges in VL elimination, with developing disease control programmes, limited healthcare infrastructure, and a shortage of trained workers. The disease is localized in certain regions, but case numbers remain a concern. Funding is scarce, and political instability, insecurity, and harsh weather conditions hinder effective implementation. While the country has seen some success with NTDs like Guinea worm, broader health system weaknesses impede progress toward VL elimination.

Given our limited resources for VL elimination, it is crucial for all stakeholders to collaborate effectively to maximize the impact of available resources. This will only be possible if we redirect our efforts toward early elimination strategies, learn from experience, and inspire other countries to follow suit. As this collaboration unfolds, other countries can also initiate their elimination processes.

In conclusion, the journey toward VL elimination in Africa is both challenging and promising. The launch of the WHO's strategic framework presents a pivotal moment in the region's fight against VL, underscoring the need for regional cooperation and targeted interventions. While countries like Uganda and Kenya show significant progress, others, such as Sudan and South Sudan, face major obstacles due to insecurity, resource constraints, and weak healthcare systems. However, the lessons learned from Southeast Asia and the progress in other Eastern African countries provide hope. By fostering solidarity, strengthening partnerships, and prioritizing early elimination strategies, Africa can move closer to the global goal of eliminating VL by 2030. Effective collaboration and shared commitment will be crucial in overcoming the remaining challenges. Through coordinated efforts, I believe the first African country can eliminate VL before 2030.

By

Simon Bolo

Head of Leishmaniasis Access, DNDi

Kacheliba sub-county hospital former nurse Luke Kanyang'areng observing a VL patient at the hospital.

Strengthening health systems to achieve Visceral Leishmaniasis elimination

As stakeholders gathered in Addis Ababa in June 2024 to discuss the elimination of visceral leishmaniasis (VL) in Eastern Africa, the room was filled with hope and determination. Health authorities, policymakers, and country representatives alike shared a collective dream, their hearts set on finally ridding the region of this devastating disease.

The energy in the room was palpable—everyone was ready to take on the challenge. But in a quiet moment, a conversation with Dr Patrick Sagaki, the medical superintendent of Amudat Hospital in Uganda, brought a sobering reality into focus. The path ahead would demand more than just the framework; it would require an unwavering commitment to strengthening health systems and investing in both human resources and infrastructure. Without these, the possibility of a VL-free Eastern Africa would remain just that—a possibility.

In the battle to eliminate visceral leishmaniasis (VL) as a public health threat in Eastern Africa, one critical strategy stands out: health systems strengthening (HSS). This vital approach is the key to ensuring lasting success against neglected tropical diseases (NTDs) like VL, which continue to plague the most vulnerable communities in tropical regions.

NTDs affect over a billion people globally, with significant concentrations in underdeveloped regions characterized by weak public health infrastructure. These diseases, often vector-borne and complex in epidemiology, pose substantial challenges to control and eradication efforts. Successful intervention hinges on robust health systems capable of delivering preventive, curative and rehabilitative measures that are timely, efficient, and equitable.

Over the past two decades, the Drugs for Neglected Tropical Diseases initiative (DNDi) has continuously partnered with ministries of health in the region, and these collaborations have delivered 13 new

A lab technician at Amudat hospital in Uganda analysing a sample.

treatments for six deadly diseases across the globe while leveraging existing health systems for maximum impact. However, treatments alone cannot eliminate VL; we need improved public health systems to enhance the overall functioning of health systems at both national and regional levels.

Health system strengthening is critical because it ensures that communities have access to essential health services without financial barriers, thereby improving overall health outcomes and equity. For NTDs, where marginalized populations bear the brunt of the burden, a strong health system is pivotal in delivering effective and comprehensive care. Moreover, robust systems are better equipped to respond to health emergencies and disease outbreaks, which is common among the marginalized populations, safeguarding public health on a broader scale.

The World Health Organization (WHO) NTD roadmap emphasizes three core strategies: mainstreaming, integration, and coordination within national health systems. Mainstreaming involves embedding NTD programs into routine healthcare structures, securing sustainable funding, and integrating services to enhance efficiency. Coordination focuses on aligning efforts across sectors like water, sanitation, and education to maximize impact and reduce duplication of efforts.

Moving forward, sustaining and expanding efforts to strengthen health systems is key. By aligning with national health priorities and integrating NTD interventions seamlessly into existing systems, we can accelerate progress towards eliminating VL and other NTDs by 2030. This approach not only optimizes resources but also builds resilience within health systems, ensuring they can adapt and respond effectively to future challenges.

Investing in health systems strengthening is not just a strategy but a necessity in the fight against VL and other NTDs. By encouraging these foundational pillars of healthcare delivery, we pave the way for a healthier and more equitable future for communities across Eastern Africa.

By

Paul Barasa

Former Senior Regional Communications Manager, DNDi

Sandflies being observed at the Kenya Medical Research Institute laboratory in Nairobi.

Insights on integrated vector management for elimination of Visceral Leishmaniasis in Eastern Africa

Visceral leishmaniasis (VL) takes a heavy toll in Eastern Africa, causing immense suffering and claiming many lives in the region – which shoulders 70% of the global VL burden. To combat this deadly neglected tropical disease (NTD), representatives from affected countries, the World Health Organization (WHO), and other partners gathered to make the historic Nairobi Declaration – a landmark commitment to eliminating VL as a public health problem in Eastern African countries. The declaration paved the way for a strategic framework – released by WHO in 2024 and developed in partnership with regional stakeholders and global organizations – that sets out how Eastern African countries can reduce cases of VL by 90% to fewer than 1500 per year by 2030.

Integrated vector management (IVM) – a rational decision-making process for the optimal use of resources for vector control – is central to this ambitious yet achievable strategy and a crucial pillar in the fight against VL.

The IVM programme should consist of the following five standard elements:

- Advocacy, social mobilization, and legislation
- Collaboration within the health sector and across other sectors
- An integrated approach to rationalizing resources and tackling several diseases in the same program
- Evidence-based decision-making, and
- Capacity building.

Effective VL control relies on precise knowledge of the spatial and temporal distribution of disease vectors. The first step in an IVM programme is developing a robust VL vector surveillance system based on high-resolution maps. This involves intensive personnel training on sandfly sampling and identification and utilizing adequate sentinel sites in locations with active VL transmission. The IVM should expand the sentinel site network to provide broader coverage for evaluating intervention tools and predicting disease burden.

The VL vectors in Eastern Africa are ***Phlebotomus orientalis***, ***P. martini***, and ***P. celiae***, which exist in distinct ecological settings but share features that may inform a common control strategy. ***P. orientalis***, associated with white thorn (***Acacia seyal***) and desert date (***Balanites aegyptiaca***) vegetation and black cotton soil, is abundant during the late dry and early rainy seasons. On the other hand, ***P. martini*** and ***P. celiae***, found in termite mounds, are more prevalent during the rainy season.

Despite differences in distribution at the microhabitat and seasonal level, the Eastern Africa VL vectors are all predominantly exophilic and exophagic, limiting

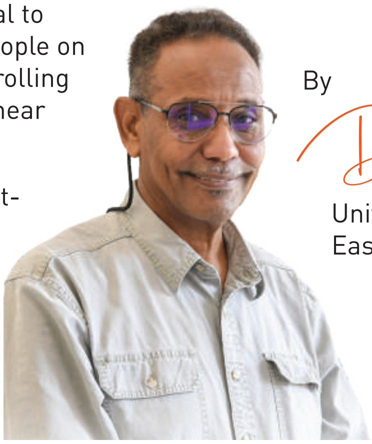
Pius Rutokadede and his cousin Daudi Lotem, who recently received treatment for Kala-azar standing next to an antill in their homestead. Sandflies usually hide in the anthills.

the efficacy of indoor residual spraying (IRS). Thus, long-lasting insecticidal nets (LLINs) emerge as the primary evidence-based control measure, with previous mass distribution of LLINs in eastern Sudan profoundly reducing VL incidence. Encouragingly, recent findings show vectors bite at times of the day when people are likely using bed nets. Intensified community mobilization should increase LLIN use, especially in locations with known VL or post-kala-azar dermal leishmaniasis (PKDL) cases.

Other personal protection measures, such as insecticide-treated clothing and materials and affordable repellents, can be valuable for mobile populations like seasonal workers and cattle herders. The IVM programme should seek partnerships with industry to provide reasonably priced, commercial personal protection against sandflies. Local populations should also be encouraged to use spatial repellents in wristbands, socks, and special devices that do not require electrical power. Strong social mobilization and health promotion campaigns are crucial to encourage these measures and educate people on avoiding sandfly bites, particularly for controlling VL transmission by *P. martini* and *P. celiae* near termite mounds.

We should prioritize epidemiological impact-oriented operational research to optimize and evaluate other promising vector control measures. Targeted outdoor residual spraying (ODRS) of house boundary fences, which reduced *P. orientalis* abundance by 89% in a Sudan pilot study, should be evaluated by testing its impact on VL incidence. The effectiveness of ODRS in protecting migrant laborers in northwestern Ethiopia should also be tested by spraying shelters provided for their sleep. ODRS should be rolled out as a primary intervention tool if it significantly reduces VL incidence. Other operational research priorities include the evaluation of the protective efficacy of shelter screening for seasonal or migrant workers, and attractive toxic sugar baits and systemic insecticide treatment of livestock for animal herders.

With a comprehensive IVM approach involving evidence-based interventions, robust surveillance, social mobilization, and operational research, the ambitious goal of reducing VL by 90% in Eastern Africa by 2030 is within reach. Solid partnerships and sustained commitment from all stakeholders will be vital to realizing a future free from the suffering and death caused by this NTD. By embracing IVM as a core component of the VL elimination strategy, we can drive transformative progress toward a healthier, more hopeful future for vulnerable communities throughout the region.



By

Dia-Eldin A. Elnaiem

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Isaac Nyeris, a community health mobiliser in Kacheliba, West Pokot, teaching the community about the signs and symptoms of kala-azar.

Operational research in mapping the road to the elimination of visceral leishmaniasis in Eastern Africa

The strategic framework for the elimination of visceral leishmaniasis (VL) as a public health problem in Eastern Africa which was launched in June 2024. The framework includes five strategies to facilitate VL elimination:

- Early diagnosis and complete case management
- Integrated vector management and vector surveillance
- Effective disease surveillance through passive and active case detection
- Social mobilization and building partnerships
- Implementation and operational research

Operational and implementation research are important in all phases of the VL elimination strategy and have practical implications across other strategic pillars. Experts who met in 2008 to prepare a framework for operational and implementation research in health and disease control programs agreed on the following statement to reflect the scope of operational research: ***Any research producing practically usable knowledge (evidence, findings, information) which can improve implementation of a plan or program (e.g., effectiveness, efficiency, quality, access) regardless of the type of research (methodology) falls within the boundaries of operational research[2].***

The strategic framework indicated that the VL elimination in the Indian subcontinent has demonstrated the value and significance of implementation research in informing strategies and ensuring evidence-based policies are put into practice. The VL strategic framework for Eastern African countries summarized the model used in Indian subcontinent, highlighting the role of the research technical advisory group, governments, and other stakeholders in identifying research priorities, using identified priorities for fundraising, and conducting operational research. The priority evidence gaps and research needs in the first four strategies mentioned above are listed.

We would like to emphasize the need for national leishmaniasis technical advisory working groups in Eastern African countries, and academia and donors inside and outside Eastern Africa, to work closely with ministries of health in Eastern African countries to ensure operational and implementation research is leveraged appropriately to accelerate progress towards VL elimination targets. We would also like to emphasize the need to enhance local research capacity to ensure sustainability, create context specific solutions, and meet the increasing demand for operational and implementation research.

By

Cherinet Adera

Senior Market Access Manager
Leishmaniasis and Mycetoma, DNDi

Nurse Scholla Achaki at Kacheliba Sub-County Hospital, drawing SSG in a syringe to administer to three-year-old Faith Kuria, held by her mother.

Overcoming treatment challenges: Children bear the brunt of visceral leishmaniasis in Eastern Africa

When nine-year-old Ruben Rotich was diagnosed with VL (kala-azar) two years ago, he was in standard three at Lemut Primary School in West Pokot County, Kenya. He had been ailing from the disease for four years, and despite numerous hospital visits in Kapenguria, doctors could not find the cause of his illness. Ruben was referred to Kacheliba Sub County Hospital, four hours from his home in Nyang'aita village, Lomut Sub County in West Pokot County.

Visceral Leishmaniasis (VL), a neglected tropical disease (NTD), affects some of the most vulnerable populations in Africa, particularly children. It is fatal if left untreated, but also treatable with timely and effective intervention. One billion people are at risk globally, and Eastern Africa currently bears the highest burden of global cases – reaching over 70% in 2022. Globally, an estimated 50,000 to 90,000 new cases occur every year with half of all cases occurring in children under 15. However, for many children in Africa, access to effective treatments is a struggle – and one that is worsened by socioeconomic challenges.

Malnutrition, poor immune functioning, and limited access to healthcare facilities make children particularly vulnerable to VL. In Eastern Africa, where leishmaniasis is endemic, hundreds of children contract the disease every year. Symptoms such as fever, weight loss, anemia, and swelling of the spleen and liver can be debilitating, leaving long-lasting physical and psychological scars even after successful treatment.

Nurse Priscilla of Amudat Hospital observing Lonyoduk Ayaipan in the Kala-azar ward.

The burden of leishmaniasis on children is more than just physical. Guardians, often mothers who are the primary caregivers, face an agonizing choice when their child falls ill: finding the delicate balance between the health of one child and the survival of the others left back home to fend for themselves. The nearest health facility equipped to diagnose and treat leishmaniasis may be hundreds of kilometres away. In countries such as Ethiopia, Sudan, and South Sudan, travelling to health facilities comes at an economic cost many families simply cannot afford. In many cases, caregivers are not aware of the symptoms of the disease, leading to delays in diagnosis and treatment.

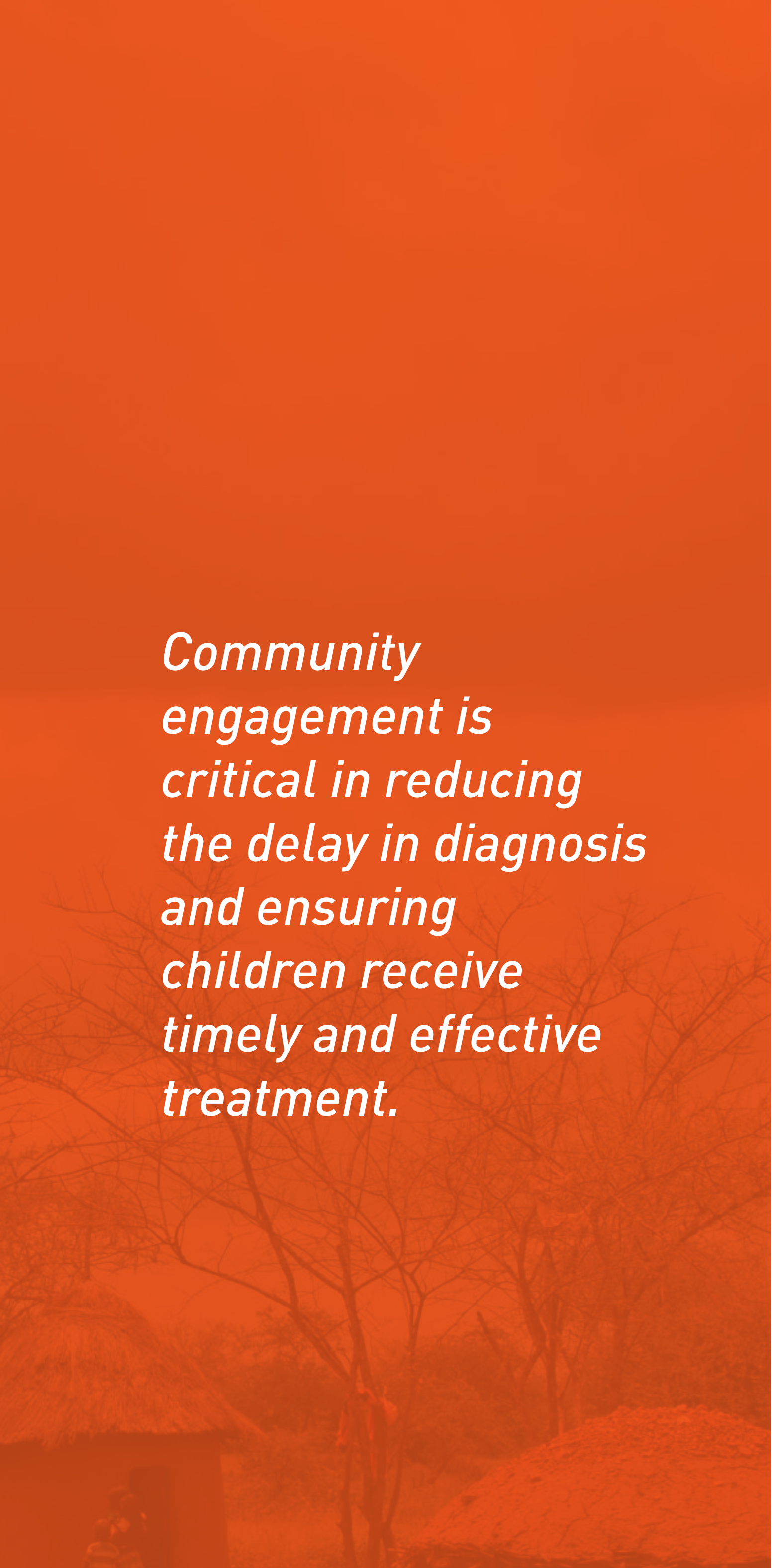
'My son has missed out on school on many occasions especially when he was unwell, and we had no idea what the issue was. He suffered from periodic headaches, fevers, vomiting, and complete loss of appetite. He lost so much weight, and I was not sure whether he would ever get better,' says Ruben's mother, Vivian Chepokitei.

Vivian, a single mother of three who runs a small hotel near her home to make ends meet, had to close her business to be with her son in hospital for close to a month. 'I left my two-year-old daughter in the care of my first-born daughter, who was 10 at the time. I did not have anyone to leave them with.' At the time, what mattered most to her was her son's health – and she is glad that he was successfully treated and is now back at school living a normal life.

Treatments for leishmaniasis, while lifesaving, are often lengthy and difficult to administer. The current treatment is a combination of daily injections of sodium stibogluconate and paromomycin (SSG+PM) for 17 days, during which time children and their caregivers must remain at the health facility. This creates additional financial and emotional challenges as caregivers and their children are forced to leave their homes and their livelihoods for extended periods.

The Drugs for Neglected Diseases initiative (DNDi) has been at the forefront of addressing these challenges, particularly in improving treatment options for children. DNDi works closely with local health authorities, research institutions, and global partners to develop safer, more effective, accessible treatments for leishmaniasis – with a focus on making treatments safer, simpler, and more child-friendly.

One of DNDi's major achievements is the development of combination therapies that shorten treatment duration and reduce the need for hospitalization. 'In Eastern Africa, DNDi has been conducting clinical trials to ensure that these therapies are both safe and effective for children. These efforts aim to make treatments not only more accessible, but also less



> *Community engagement is critical in reducing the delay in diagnosis and ensuring children receive timely and effective treatment.*

disruptive to children's lives, allowing them to recover faster and return home sooner,' noted Prof. Sam Kariuki, DNDi Eastern Africa Director.

Currently, a potential all-new oral treatment developed from a new molecule – LXE408 – is being studied in clinical trials in Ethiopia. If proven effective, it will be administered in the form of oral pills, making it much easier to administer closer to homes and families. It is hoped the treatment will also prove far safer than the current treatment which can cause life-threatening complications involving the liver, heart, and pancreas.

Additionally, DNDi is pushing for increased awareness and education on leishmaniasis in endemic communities. Through partnerships with local health workers and ministries of health, DNDi is building the capacity of caregivers to recognize the symptoms early and seek treatment before it's too late. This kind of community engagement is critical in reducing the delay in diagnosis and ensuring children receive timely and effective treatment.

Despite these advances, much more is needed. Leishmaniasis remains a significant public health problem in Africa, with children continuing to bear the brunt of the disease. The development of child-friendly treatments is still in its early stages, and significant research and development (R&D) gaps remain. Funding for NTDs like leishmaniasis is often insufficient and there is an urgent need for increased investment to ensure that better diagnostic tools, treatments, and preventive measures are developed and made available.

The fight against leishmaniasis, especially among children, is far from over. DNDi's work has shown that progress is possible, but to scale up these efforts, a collaborative approach is critical. Governments, international donors, and private-sector stakeholders must step up to increase funding for R&D, particularly for pediatric leishmaniasis treatments. Moreover, improving access to treatment requires strengthening healthcare systems in endemic regions – a goal that is only achievable through sustained partnerships. By working collectively, we can give every child affected by leishmaniasis a chance to grow up healthy, free from this devastating disease.

By

Mercy Mumo

Communications
Manager, DNDi

IMA World Health project vehicle stuck in mud on its way to community visit in South Sudan

Tackling visceral leishmaniasis in hard-to-reach endemic areas in South Sudan

As the world's youngest nation, South Sudan continues to face persistent subnational violence and political strife that have undermined post-independence gains and exacerbated existing humanitarian needs. Over a decade since gaining independence, the country continues to face significant challenges, including fragility, skyrocketing inflation, environmental shocks like flooding and drought, and ongoing instability. The United Nations estimates that in 2024, approximately 9 million people – three-quarters of the population – in South Sudan will require humanitarian assistance, with 6.3 million lacking access to essential healthcare services. Compounding these challenges are 14 neglected tropical diseases (NTDs) endemic to the country, posing a significant health threat.

One such NTD is visceral leishmaniasis (VL), also known as kala-azar or black fever. This severe disease, nearly always fatal if left untreated, is transmitted through the bite of infected sandflies, with the vector inhabiting savannah woodlands, particularly around red acacia and desert date trees, cracked black cotton soil, and termite mounds – all of which are prevalent in South Sudan's endemic areas.

The 2013 conflict in South Sudan led to the destruction of the majority of VL treatment centres in the country and the displacement of many communities. This was followed in 2014 by a VL outbreak in Jonglei and Upper Nile States, during which only five VL treatment centres remained operational. In response, a unique partnership formed in 2015 between the South Sudan Ministry of Health and implementing partners that provided key technical and operational support to scale up treatment services. Under the leadership of the Ministry of Health, IMA World Health and its partners were tasked with providing life-saving interventions in the four VL-endemic states of South Sudan (Unity, Jonglei, Upper Nile, and Eastern Equatoria).

In this context, supported by key VL stakeholders such as the South Sudan Ministry of Health, DNDi, the END Fund, and the World Health Organization (WHO), IMA World Health is addressing the burden of VL in the four endemic states of South Sudan. These partnerships have enabled access to lifesaving VL treatments in some of the country's most remote areas.

The United Nations estimates that in 2024, approximately 9 million people – three-quarters of the population – in South Sudan will require humanitarian assistance, with 6.3 million lacking access to essential healthcare services.

IMA World Health currently provides VL services at 25 health facilities in endemic areas. Seventy-five community health volunteers (CHVs) have been recruited by the County Health Departments (CHDs) to bring services closer to communities. The CHVs carry out community-based VL active case search, community awareness, and patient follow-up after treatment to establish final treatment outcomes. In partnership with the CHDs, IMA World Health organizes radio talk shows to increase community awareness of VL signs, symptoms, and treatment options, provided free of charge.

The IMA World Health VL team frequently visits the field to conduct supportive supervision, engage in social and behaviour change communication activities, and distribute both VL and non-VL commodities. The team also provides training and on-the-job mentorship that equips health facility staff with the required knowledge and skills to accurately diagnose and manage VL cases.

Since 2015, with support from various partners, IMA World Health has treated 8,243 VL patients, delivering life-saving treatments to some of the most remote and hard-to-reach areas of South Sudan. However, these successes have not been achieved easily. Due to insecurity, flooding, and poor road conditions, some implementation areas have been rendered inaccessible. To ensure continuity of these vital services, the IMA World Health team has pre-staged supplies where feasible and has shown incredible commitment and resilience, sometimes walking up to five hours through flooded wetlands to reach health facilities.

Operating within the framework of 'leave no-one behind', the IMA World Health team was able to document the story of 30-year-old Musa, a resident of South Sudan's Jonglei State. In 2024, Musa fell ill but was unsure of the cause. As is commonplace, he sought treatment from a traditional healer, but his condition continued to deteriorate. Musa's family was familiar with VL, as his mother had been treated during the 2014 outbreak, and his father had recently attended a VL health education session led by an IMA World Health CHV. Thanks to their awareness of VL, Musa was able to receive the treatment he needed.

After completing VL treatment, Musa shared, 'I am feeling well now without spending anything for the treatment, compared to the traditional healer who demanded payment though my condition was worsening.' Musa expressed his gratitude and plans to encourage his community to use treated nets and seek services at one of the supported health clinics if they feel unwell. Individuals like Musa and his father serve as community advocates in the fight against VL in South Sudan.

Thanks to current and past VL partnerships, including with DNDi, significant strides have been made to achieve the 2030 goal of VL elimination. The program has successfully promoted early, free, and effective diagnosis and treatment through active case finding, community engagement, and field-level training, reaching VL patients in endemic areas across South Sudan, whether in cattle camps or remote villages. With continued collaboration and commitment, an end to VL is possible in South Sudan.

By

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Lessons learned from the 10 years of work on VL in East Pokot/ Tiaty, Baringo County, Kenya

In 2011, Northeastern University and the University of Nairobi School of Public Health began a joint initiative to study and alleviate the impact of visceral leishmaniasis (VL), also known as kala-azar, in Baringo County, Kenya. Towards this aim, we established The Research on Multi-Disease and Educational Services (TERMES) Centre in 2016 in coordination with Chemolingot Sub-County Hospital (CSCH). On 26 July 2019, the TERMES Centre and VL treatment services at CSCH were officially inaugurated by Baringo Governor H.E. Stanley Kiptis. Since then, over 3,000 patients have been screened and 600+ patients treated for VL through mobile clinics in the community and hospital operations. In 2020, our project was formally incorporated as an NGO: the African Centre for Community Investment in Health (ACCIH), with a guiding mission to eliminate disease and poverty in neglected communities (https://www.accih.org/).

Over the years, we have learnt invaluable lessons that have shaped this highly responsive and impactful programme. At the very top is taking time to understand the culture, social structure, gaps, and strengths of the community to prioritize community-felt needs. For the Pokot community, access to treatment was the biggest challenge. The long distance and high costs of travel to Kimalel Health Centre, the only treatment centre at that time in Baringo, insecurity at the border of the Pokot and Tugen communities, and a language barrier due in part to low levels of literacy (under 20%) were major obstacles. Thus, providing VL treatment at the Chemolingot Hospital was our top priority. Community understanding and engagement through communication, education, and environmental modification have also been central to disease control.

Through the support of key partners, the Ministry of Health has trained and equipped 139 health professionals (nurses, laboratory technicians, and clinical officers), 158 community health promoters, 45 traditional healers, 60 motorbike drivers, 60 opinion

Health workers attend to a kala-azar patient at Chemolingot Sub-county hospital VL treatment centre as his father looks on.

leaders, and 7 women's groups to conduct health education campaigns in the community, reaching over 20,000 community members across the entirety of Tiaty constituency (East and West) in Baringo county. To work towards attainable and sustainable solutions, we have set clear, concise, and manageable expectations, acknowledging the limitations of available resources.

Aligning project objectives with county and government objectives has been essential for local government buy-in and to achieve national strategic directions. The program has demonstrated high levels of sustainability by focusing on capacity building on behalf of the Ministry of Health and utilizing government infrastructure and personnel, ensuring operations will continue without interruptions post funding. The CSCH VL treatment centre is now fully supported through the World Health Organization (WHO), END Fund, and others with test kits and drugs to provide largely free screening and treatment services as part of regular service delivery.

Working with governments has also allowed programme personnel to participate in VL technical working groups on policy formulation. Still, challenges of overreliance on external funding and government inaction threaten the sustainability of the program. Despite extensive advocacy, concerns remain regarding future government provision of laboratory equipment and reagents at CSCH.

Partnerships and cross-sector integration have been crucial for leveraging scarce resources and achieving programme goals. With the support of key partners at both the local and global level, including Izumi Foundation in Boston, Probitas Foundation in Spain and Kaperur CBO in Chemolingot, several buildings at CSCH have been rehabilitated with furniture, equipment, and supplies, and training has been provided to health workers.

We have worked with Northeastern University, Boston, the International Centre of Insect Physiology and Ecology (icipe), and the Kenya Medical Research Institute (KEMRI) to conduct epidemiology and vector studies on risk factors for VL and vector control. Several of our publications and conference disseminations can be found in the publications tab of the ACCIH website. Two of these published in June and September 2024 are the first studies to examine the outcomes of treatment in Kenya outside trial settings, and environmental and household risk factors in Tiaty, respectively. These studies are led by, among others, our students from Northeastern University in Boston as part of their

> *Over the past decade, we have also learned that successful project management involves information sharing, timelines, monitoring and evaluation, surveillance, scaling, and a dedicated team.*

undergraduate research fellowship. These research internships bring additional resources, time, and capacities that expand and measure our programming. Furthermore, we initiated integrated full mobile clinics to diagnose and treat common ailments during our VL active case searches, nutritional support, and distribution of mosquito nets and water purification tablets.

Over the past decade, we have also learned that successful project management involves information sharing, timelines, monitoring and evaluation, surveillance, scaling, and a dedicated team. These elements help earn the trust of communities and funders, identify successes and areas for improvement, and enable programmes to forecast and make timely adjustments. Finally, managing change in a project and in its team is crucial. Insecurity caused by cattle rustling, transitions of power from one government to the next, health worker strikes, COVID-19, insecurity caused by cattle rustling, transitions of power from one government to the next, health worker strikes, COVID-19, extreme poverty, population movements, and ecological and livelihoods changes have informed VL programming in Tiaty and exemplified the importance of creating a contingency plan for unforeseen circumstances.

Additionally, it is necessary to respond to arising needs. That is how we have been able to integrate crucial medical camps as well as initiate, with icipe and KEMRI, work in Kajiado resulting in two treatment centres there and cutaneous leishmaniasis activities in Nakuru and Nyandarua.

Northeastern University with its partners has made significant improvements in VL diagnosis and treatment in Baringo and has also contributed to national and regional policy development. Despite working in remote locations and dealing with the challenges of frequent conflicts, we have remained undeterred in our mission – but VL still poses a significant threat: given that we are treating over 150 patients annually out of a population of 153,000 people, the elimination target of <1 per 10,000 people suggest a long road ahead. The TERMES Center provides a model for excellence in the VL elimination efforts for East Africa, thus, we are hopeful the lessons we have learned and shared will provide helpful insights for future VL interventions elsewhere in Eastern Africa as we work together to achieve elimination of this devastating disease.

By

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The starting line of the 10km run during the DNDi @20 charity run in Kacheliba in November 2023.

Let communities lead: Driving advocacy and change from within

It is early in the morning on 18 November 2023, in Kacheliba, West Pokot, Kenya. On a typical Saturday morning, this small town in northwestern Kenya is usually quiet, with very little activity. However, on this particular day, at just 5:00 AM, a lot is happening. People of all ages and from walks of life are heading to St. Comboni Girls Primary School for a significant event. For the first time in the region, a charity run has been organized under the banner of ***Run for the Neglected Patients***.

This race goes beyond being just a physical challenge; its primary objective is to raise awareness about neglected diseases, with the event highlighting the urgent need for research and development into innovative patient solutions and mechanisms to address the treatment gaps faced by the world's most vulnerable populations.

Kacheliba is in a region that reports a high number of visceral leishmaniasis (VL) cases, one of the world's deadliest parasitic infections after malaria. In 2022, over 73% of global VL cases were reported in Eastern Africa, with half of those cases affecting children under the age of 15. The urgency of this situation is clear, and this event is vital in raising awareness and advocating for meaningful change.

DNDi and LEAP have been carrying out leishmaniasis research activities in this region since 2012.

St. Comboni Girls Kacheliba, where the DNDi @20 medical camp was held in November 2023.

'We have a rich history in West Pokot County, beginning with establishing the research and treatment centre at Kacheliba Sub-County Hospital 12 years ago', said Prof. Samuel Kariuki, DNDi Eastern Africa Director. 'Together with our Ministry of Health partners, we have built infrastructure, trained healthcare providers, conducted successful clinical trials, and developed treatments for VL here.'

Throughout their work in Kacheliba, Kenya, and in other countries in Eastern Africa, DNDi and LEAP have recognized the critical role of communities in research and development and treatment access. It is important to engage communities early, encouraging their participation in finding solutions and raising awareness about the devastating impact of neglected diseases. This charity run was a prime example of how community involvement can drive positive change: over 1000 people of all ages participated in the charity run, including both professional and amateur runners.

The charity run was one of the highlights of a week-long series of activities that DNDi and partners held to raise awareness in the community and among stakeholders. Earlier in the week, over 900 individuals, including 252 children under five attended a medical camp that offered free treatment and screening for by neglected diseases – particularly VL and mycetoma. The week's events were not only about providing treatment but also educating communities.

Community engagement is a critical pillar in the management and elimination of neglected tropical diseases (NTDs). By actively involving communities in the planning, implementation, and monitoring of NTD programs, health interventions become more culturally relevant, accessible, and sustainable. Raising awareness through events like the marathon and medical camp and organizing sessions to disseminate clinical trial results are important components.

Beyond these events, there are other activities that DNDi and the LEAP Platform have organized to engage with communities. Working with the media, particularly community radio, has proven invaluable: 75% of people in Kenya, 85% in Uganda, and about 50% in Ethiopia listen to radio. This makes radio one of the most important tools in reaching communities. Community stations are uniquely positioned in their ability to deliver health-related messages to diverse and remote communities.

Stakeholder event during the DNDi @20 celebrations, attended by French Ambassador Arnaud Suquet, DNDi Executive Director Luis Pizzaro, DNDi Africa Ambassador Monique Wasunna, and Eastern Africa Director Sam Kariuki.

In 2023, community radio played a pivotal role in raising awareness about NTDs in Kenya and Uganda. Through engaging two radio stations in the region – Radio Kalya and North Rift Radio – DNDi reached people in multiple endemic regions, providing information about diseases, symptoms, and treatment options. Success stories of cured patients inspired hope and motivated others to seek help. These stations reach a combined audience of over 750,000 people during prime time.

Finally, DNDi and LEAP rely on "champions" to amplify their message. These passionate individuals, including former patients and community leaders, use their influence to raise awareness and advocate for change. Through their involvement in community events, engagement with local leaders, and media appearances, they have played a crucial role in driving positive change.

As Luke Kanyang'areng, a former VL patient, community champion, and nurse, shared, 'I survived kala-azar, and as a former patient, I want people to understand that this disease is real and continues to affect and even kill people. However, there is hope if we have new tools and diagnose treatments early.'

To effectively eliminate diseases like VL, we must be more intentional about involving communities in VL projects. According to the recently released VL elimination framework, we need to 'employ various strategies to ensure that communities are at the forefront of our efforts'.

By

Linet Otieno

Head of
Communications, DNDi

During the launch of a new laboratory built by DNDi through its partners at Amudat Hospital, Uganda.

DNDi launches new facilities to make treatment for visceral leishmaniasis more accessible in Eastern Africa

Following major recent cooperation, DNDi, the West Pokot County Government in Kenya, the Karamoja sub-Region Government, and the Ministry of Health (MoH) in Uganda have inaugurated four new hospital buildings across the two countries.

On 30 July 2024, DNDi in partnership with the West Pokot County Government launched a new 32-bed, solar-powered general ward at Sigor sub-county hospital and a modern kitchen at Kacheliba Sub- County Hospital in West Pokot County. The next day, DNDi's team travelled to Amudat Hospital in the neighbouring Amudat District of Uganda to celebrate the completion and opening of a new state-of-the-art solar-powered laboratory and modern kitchen.

The new facilities represent a milestone in DNDi's partnership with the ministries of health in both countries to improve healthcare infrastructure and boost access to visceral leishmaniasis (VL) healthcare in the neighbouring regions. Building on over 15 years of collaboration, these partnerships continue to make strides in bringing VL treatment closer to affected communities while also facilitating access to quality healthcare services, enhancing capacity to manage complicated cases, increasing bed capacity, and providing better nutritional support at the facility level.

'This collaboration between DNDi, the county government, and ministries of health demonstrates our shared commitment to eliminating visceral leishmaniasis in Eastern Africa,' said Prof. Samuel Kariuki, DNDi Eastern Africa Director, during the launch ceremony in Sigor. 'The modern laboratory will be fully equipped to

In 2022, Eastern Africa accounted for over 70% of global VL cases, with half of these cases occurring in children under 15 years old.

support the diagnosis of a wide range of ailments for all patients accessing the hospital from the region and beyond.'

The newly inaugurated ward at Sigor Sub-County Hospital will provide the much-needed space and resources for inpatient care for different medical conditions. Previously, VL patients from Sigor had to travel nearly three hours for treatment at Kacheliba Sub-County Hospital, with over 20% of VL patients treated in Kacheliba coming from Sigor in 2022. With the expanded bed capacity and diagnostic services that the new facilities offer, patients can now receive timely and effective treatment closer to home.

West Pokot Governor Simon Kachapin reaffirmed his administration's dedication to prioritizing healthcare initiatives and ensuring equitable access to treatment for VL across the high-burden county.

'We are committed to exploring innovative solutions and forging partnerships to strengthen our healthcare system and address the evolving needs of West Pokot County,' he stated.

At Kacheliba Sub-County Hospital in Kenya and Amudat District Hospital in Uganda, the new kitchens will significantly enhance nutrition and food safety for patients, supporting their overall health and recovery. Many VL patients suffer from malnutrition due to food scarcity caused by poverty and loss of appetite due to the disease. Both the Kacheliba and Amudat facilities provide meals to VL patients free of charge.

Additionally, the newly established laboratory at Amudat District Hospital will play a crucial role in advancing diagnostic and treatment capabilities, further supporting the fight against VL and other diseases impacting communities in the region.

'We do not discriminate when it comes to healthcare. We have Kenyans who come for treatment here and it is only a geographical border that separates them. When they come here, we offer equal treatment opportunities. This cross-border collaboration is important for elimination,' said Dr Patrick Sagaki, Medical Superintendent, Amudat District Hospital.

'We want to thank DNDi for always being innovative. The current kala-azar drug, approved by the World Health Organization (WHO) and benefiting patients worldwide, was actually developed here in Amudat with their assistance,' said Dr Mubangizi Alfred, the acting Assistant Commissioner for Health Services – Vector Borne and Neglected Tropical Diseases (VB & NTD) at the Uganda MoH. 'And now, with their support, we have been able to establish this new laboratory.'

In 2022, Eastern Africa accounted for over 70% of global VL cases, with half of these cases occurring in children under 15 years old. The new facilities will play a crucial role in advancing the collective effort to eliminate VL in Eastern Africa by 2030. Moreover, the expansion of these healthcare facilities is expected to create additional employment opportunities, contributing to socio-economic development in West Pokot County and Amudat.

The success of the projects at Sigor, Kacheliba, and Amudat are a testament to the power of working together to prioritize patients. The use of solar power as a renewable source of energy also plays a significant role in reducing carbon footprint of the Sigor and Amudat hospitals.

The facilities were developed by DNDi with funding from Germany's Federal Ministry for Economic Cooperation and Development (BMZ) through the KfW Development Bank.

By

Edith Magak

Communications Consultant, DNDi

The focus on children under 14 years old who often suffer from malnutrition due to the chronic nature of the disease and ongoing food insecurity highlights the need for integrated nutritional rehabilitation alongside medical treatment.

A photo of a homestead in Akorkeya Village, Amudat Uganda. Kala-azar has been described in Amudat from the 1950's.

Re-strategizing the VL elimination journey in Uganda

Visceral leishmaniasis (VL), commonly known as kala-azar remains a pressing public health challenge in Uganda, having a disproportionate impact on the most vulnerable communities. With approximately 1.4 million people at risk, VL ranks as the fourth most significant vector-borne disease in the country, after malaria, schistosomiasis, and lymphatic filariasis.

The Karamoja region, located in northeastern Uganda, is VL-endemic and characterized by a largely nomadic population living in semi-arid conditions. The community faces numerous challenges, including high poverty rates, low levels of literacy, and cultural barriers – all of which hinder effective health-seeking behaviour and exacerbate the health crisis in the area.

To address these challenges, the Uganda Ministry of Health has initiated a strategic re-evaluation of its VL elimination efforts. This process began with a comprehensive analysis of historical VL data to identify endemic villages and nomadic communities most affected by the disease. In response, Mobile Mentor Teams were established to conduct community sensitization, daily case searches, and index case testing tailored to the needs of highly mobile populations.

These teams consist of community health workers, clinicians, and lab technologists with a deep understanding of the local terrain and social dynamics. By collaborating with Village Health Teams

Patients lying outside the kala-azar ward in Amudat Hospital, Uganda.

and health workers at VL diagnostic centres, the teams work to enhance geographical coverage and ensure that identified cases are swiftly referred to the nearest treatment centre. This proactive approach aims to reduce the time lag between symptom onset and obtaining treatment, thereby minimizing case fatalities, especially among critically ill patients who may require additional services such as blood transfusions.

The focus on children under 14 years old who often suffer from malnutrition due to the chronic nature of the disease and ongoing food insecurity highlights the need for integrated nutritional rehabilitation alongside medical treatment.

The Ministry of Health, in collaboration with DNDi and the END Fund, is committed to expanding this effective surveillance model, establishing more VL treatment centres across all endemic districts, and integrating VL services into routine healthcare. With advancements in understanding of the disease and improvements in diagnostic and treatment tools, the possibility of eliminating kala-azar is increasingly within reach.

Earlier this year, a comprehensive framework was launched to guide health authorities, policymakers, and stakeholders in the elimination of VL as a public health concern in Eastern Africa. This framework outlines five primary strategies: early diagnosis and treatment, integrated vector management, effective surveillance, advocacy, and operational research.

Looking ahead, the sustainability of these efforts will rely on adequate funding, political commitment, focused research, and robust surveillance systems. Continued active case finding, along with monitoring for drug resistance and managing post-kala-azar dermal leishmaniasis (PKDL), will be crucial for both the elimination and post-elimination phases.

Through these strategic re-evaluations and dedicated community efforts, Uganda is poised to make significant strides in the fight against VL, aiming for a future free of this devastating disease.

By

Ivan Ankunda

Ministry of Health, Uganda

Jorge Alvar engaging children at a market in Kenya during his field visit.

Celebrating Jorge Alvar: A decade of dedication and achievement at DNDi

After 10 productive and enjoyable years, Jorge Alvar, Senior Leishmaniasis Advisor, left DNDi in May 2024.

Before joining DNDi, Jorge spent 22 years at the Instituto de Salud Carlos III, Madrid, where he made seminal contributions to the knowledge of leishmaniasis, including describing the first-ever case of a patient living with both VL and HIV. Subsequently, he led the World Health Organization (WHO) leishmaniasis global program for eight years, with critical achievements such as the first World Health Assembly (WHA) resolution on the control of leishmaniasis, a liposomal amphotericin B (LAmB) donation programme, a landmark paper describing leishmaniasis country profiles, and direct participation in launching the leishmaniasis elimination programme in South Asia.

In 2013, Jorge joined DNDi as Head of Leishmaniasis – bringing the leishmaniasis team we have today and completely transforming the DNDi strategy for leishmaniasis to make it a truly end-to-end, holistic programme.

During Jorge's 10 years at DNDi, we have implemented and completed multiple studies for the development of new therapies with currently available drugs. New guidelines were released: Pan American Health Organization (PAHO) guidelines for leishmaniasis in the Americas, and WHO guidelines for management of patients living with both and HIV in Asia and Africa. A new WHO guideline is currently under review for the recommendation of new therapies for VL in Eastern Africa, and for PKDL in Asia and East Africa.

In addition to the development of new treatments, Jorge actively positioned the DNDi leishmaniasis programme in the international arena, and strengthened ties with WHO and Médecins sans Frontières (MSF). DNDi was one of the partners in the £200M UK-funded KalaCORE programme that worked to control and eliminate VL in South Asia and Eastern Africa from 2014 to 2019 – contributing to the elimination of VL in South Asia and strengthening VL healthcare in Eastern Africa. Furthermore, key

> *In 2013, Jorge joined DNDi as Head of Leishmaniasis – bringing the leishmaniasis team we have today and completely transforming the DNDi strategy for leishmaniasis to make it a truly end-to-end, holistic programme.*

questions related to the reservoir of disease have been addressed with the establishment of an insectarium in Mymensingh, Bangladesh, and the implementation of infectivity studies to confirm the role of patients with VL and PKDL in transmission of the disease.

Jorge's contributions to communications and advocacy included the historical WorldLeish 6 event in Toledo, Spain, co-organized by DNDi and Instituto Carlos III, and then WorldLeish 7 in Cartagena, Colombia, organized by our partner PECET, and co-chaired by Jorge. Those who were at WorldLeish 6 will remember the exuberance of the event, which, instead of the usual gala dinner, had participants mesmerized by a battle between three 17th century organs in a concert at Toledo Cathedral!

In this time, Jorge also paid special attention to ensuring that all the work we produced was published, giving guidance to the team and pushing us to be on time with publications. As a result, the leishmaniasis team has contributed to more than 30 papers published in the last decade.

Finally, he was elected as an academic to the Spanish Royal Academy of Medicine in 2020 for his instrumental role in developing the leishmaniasis strategy that led to the recommendation of DNDi for the prestigious Princess of Asturias Prize, for which DNDi received the award for International Cooperation in 2023.

In 2019, Jorge partially retired, but remained as our senior advisor, leading the EDCTP-funded Leish Access Consortium with partners in Eastern Africa and Europe. I will take on this responsibility and work with the Leish Access team for a smooth transition.

Now, Jorge is looking forward to dedicating more time to his creative side, painting, sculpting, writing books, and enjoying time with friends. Jorge will be missed, but we know he will continue to be with us, advising the team, and inspiring many others with his charisma, sense of humour, and brilliance.

By

Fabiana Alves

NTD Leishmaniasis-
Mycetoma Cluster Director,
DNDi

Tributes from Jorge's colleagues at DNDi

Joelle Tanguy, Former External Affairs Director, DNDi

A simple thank you can't honour the breadth of DNDi's gratitude for the extraordinary role you have played along the years to advance our mission. I was a first-hand witness of your amazing network and influence in Spain: such recognition comes from your outstanding role in Spain and worldwide, and an inspiration for all younger scientists in our network!

Congratulations and best wishes.

Luis Pizzaro, Executive Director DNDi

Thank you, Jorge, for your amazing commitment to DNDi over these ten years. Your experience and excellence have made a significant contribution to leishmaniasis patients and left a lasting impact on your colleagues. Your leadership and skill have been invaluable to our organisation, and we are extremely grateful to have had the opportunity to have worked alongside you.

Wish you much happiness for this next chapter – you will be missed!

Rachel Cohen, Senior Advisor, Global Policy Advocacy & Access Policy and Advocacy, DNDi

The end of one era, but the beginning of another! Best regards and thanks to you, sir!

Simon Bolo, Head of Leishmaniasis Access, DNDi

Dr Jorge Alvar has been instrumental in the progress we have made in controlling leishmaniasis in Africa and globally. His work initially at WHO, then at DNDi, brought many significant changes to the various leishmaniasis programmes across the globe. Forums such as WorldLeish and LEAP benefited from his experience, skills, and expertise over the years. I am grateful to have benefited from Jorge's immense knowledge on public health issues, especially around leishmaniasis, having personally learnt from him through one-to-one interactions in various forums. As a personal friend, I enjoyed his company as we made trips to the field with the singular aim of improving the lives of people affected by VL. Jorge's contribution will surely be remembered as pivotal to our progress against leishmaniasis in Eastern Africa and around the world. I wish you the very best in your personal endeavours, my friend.

Monique Wasunna, DNDi Africa Ambassador

Dear Jorge,
As you move on after incredible 10 years at DNDi, I want to thank you for your immense contribution towards the elimination of VL. It has truly inspired us all, especially in the African region. You've been a true "Leishmaniac" dedicated to our mission. Your expertise, friendship, and unwavering commitment to find treatments for the most neglected patients will be greatly missed. Thank you for everything you've done – I wish you all the best in your next chapter and am sure our paths will cross again soon!

Abdella Tofik, 18, a Grade 11 student from Hosaena Town, Southern Ethiopia, currently living with CL.

Cutaneous leishmaniasis in Ethiopia: Challenges, innovations, and hope for patients

Globally, there are over 600,000 new cutaneous leishmaniasis (CL) each year. This widespread – and often overlooked – disease is spread by the bite of infected sandflies. It causes painful skin lesions that can cause scarring, disfigurement, and social stigma – especially for women and children.

The lesions typically appear on exposed areas of the body, such as the face, arms, and legs, and can last for months or even years if left untreated. Although CL is not as deadly as its visceral counterpart, it can have devastating psychological and economic effects, particularly in rural communities where access to healthcare and treatment is limited.

Ethiopia is one of the countries most affected by CL in Eastern Africa. While thousands of new cases are reported each year, many more cases go unreported due to limited surveillance and awareness. CL tends to occur in areas characterized by widespread poverty, poor housing conditions, and proximity to the natural habitats of sandflies. These conditions are prevalent in several regions of Ethiopia, particularly in the northern and eastern parts of the country.

Children and young adults are often the most affected by the disease, accounting for 50% of those infected. Abdella Tofik, an 18-year-old grade 11 student from Hosaena town in southern Ethiopia, is currently living with CL. Beginning with what looked like a pimple in September 2023, the lesion has continued to grow larger over the months.

'I have visited more than three hospital facilities. I have been given tablets, topical creams, and injections, but there has been no change. Earlier this year, I met a friend with a similar scar who was treated at ALERT Hospital in Addis. In May 2024, I began my treatment journey,' he shares.

Tofik has experienced the stigma associated with CL firsthand and often hides his scar under a cap. However, his family has been supportive throughout his treatment process. 'People keep asking me what happened to my face and why the scar isn't disappearing. I don't have an answer for them,' he says.

Physical appearance can have a significant impact on social standing and economic opportunities. The disfigurement caused by CL can lead to stigma, discrimination, and even loss of livelihood. Women and girls face greater challenges as visible scars can limit marriage prospects and lead to social isolation.

Tarikua Workagenyehu shows her healing CL scar at ALERT Hospital in Addis Ababa during a follow-up visit.

Torikwa Workagenyehu, a mother of four from Adama city, understands this all too well. What started as a small, acne-like wound on her left cheek continued to grow. She tried a home remedy involving ginger and garlic paste, which she applied religiously for six months, but nothing changed. The lesion kept growing.

'I sell sawdust from wood workshops and make spices, so I interact with many people. Because of this scar, I have been forced to partially cover my face to avoid questions and stares. I stopped attending social events because people were afraid I might infect them,' she revealed.

Treating CL in Ethiopia remains a challenge. The most used treatments involve painful and invasive procedures – such as 21 days of intralesional injections of pentavalent antimonial medication (sodium stibogluconate and meglumine antimoniate) and 28 days of oral miltefosine taken twice a day. Cryotherapy, which uses liquid nitrogen to freeze lesions, is one possible treatment option. These treatments have significant drawbacks. For example, pentavalent antimonial therapy can cause severe side effects, and cryotherapy requires specialized equipment that is often unavailable in rural health centres.

Access to treatment is another major challenge. Many patients live in remote areas far from healthcare facilities equipped to provide the necessary care. Consequently, people with CL often delay seeking treatment, which worsens their condition and increases the likelihood of long-term scarring. Additionally, the costs of treatment and travel to healthcare facilities creates a heavy financial burden for families – for many, it is unaffordable.

Innovation is essential in the fight against CL. There is a growing need for new treatments that are both safer and more accessible for patients in low-resource settings like Ethiopia. Ongoing research focuses on topical treatments, oral medications, and shorter, less invasive therapies. These innovations aim to simplify the treatment process, minimize side effects, and eliminate the need for specialized equipment.

DNDi is playing a key role in advancing this innovation. DNDi's mission is to develop new, effective, and affordable treatments for neglected diseases like leishmaniasis, ensuring that patients in even the most remote regions can access the treatment they need. In Ethiopia, DNDi collaborates with local and international partners to advance clinical trials for new therapies that could revolutionize CL treatment.

One notable effort involves exploring thermotherapy, a treatment that uses heat to kill parasites in lesions. In this method, heat is applied directly to the lesion. This non-invasive approach offers a safer and simpler alternative to traditional therapies.

'For uncomplicated CL cases, thermotherapy is a good option, though it must be performed by a qualified medical practitioner; otherwise, it can cause second-degree burns,' says Dr. Shimelis Nigussie Doni, a dermatologist at ALERT Hospital in Addis Ababa.

Torikwa has already benefited from a combination of oral medication and thermotherapy: 'I was on oral treatment for a month and had one session of heat treatment. The scar is not as bad, and it's healing slowly,' he says.

DNDi is also investigating the potential of combination therapies that could shorten treatment duration and reduce the likelihood of relapse, ensuring more patients achieve complete cure with fewer visits to healthcare facilities.

By

Mercy Mumo

Communications Manager, DNDi

Breaking new ground in healthcare: My experience with DNDi at Amudat Hospital

I come from the Teso region of Eastern Uganda, bordering Karamoja. Growing up in this underserved community, we faced numerous challenges. In the early 2000s, the Lord's Resistance Army (LRA) rebels ripped through our lives, cutting off us access to education for nearly three years. During this time, I often wondered why life seemed normal in other parts of the country while we lived in fear and isolation.

After fleeing to safety at my uncle's place in the Busoga region, I was able to return to school—a privilege many of my peers who remained in Karamoja during the war did not have. After completing university, I secured a job in Soroti City, where I worked diligently for a year. However, I felt an insatiable desire to serve the unrepresented, voiceless, and marginalized populations – the ones who had been overlooked, just like my own community had been.

Then I came across an advert from Amudat Hospital supported by the Drugs for Neglected Diseases Initiative (DNDi). I didn't know much about DNDi at the time, but one thing was crystal clear: they were focused on what mattered most to me—serving neglected populations. I remember telling a colleague, "I don't know much about DNDi, but I want to serve those forgotten by society too!"

After receiving a job offer from Amudat, I faced a dilemma: I also had an offer from a renowned non-governmental organization (NGO) implementing HIV activities in Uganda. Ultimately, I could not resist the call to serve my community, which faced similar challenges to those I had endured.

I accepted the role at Amudat Hospital, despite its remote location—over 400 km from my hometown—and its substandard laboratory facilities. Friends and family thought I was making a terrible mistake, but I felt a deep connection with the patients, staff, and community. Driven by memories of my past and hope for a better future, I began my journey in Amudat, where I have now been for three years.

With support from DNDi, I set out to strengthen the diagnosis and treatment of kala-azar in the region. Our laboratory not only diagnoses this devastating disease but also offers healthcare services to the community. We have fully supported and coordinated laboratory activities, assisting 11 lower health facilities in implementing Ministry of Health (MoH) laboratory activities.

In 2022, DNDi and the Uganda MoH Uganda helped us enhance kala-azar diagnosis and treatment in the region. We trained and mentored health workers and Village Health Teams (VHTs) on case definitions and kala-azar diagnosis across all districts and health facilities in Karamoja. This effort built a network of dedicated healthcare professionals committed to combating this neglected disease.

The results were soon evident: kala-azar diagnosis rates improved significantly, and treatment outcomes were better. Remote health facilities which had previously struggled began successfully diagnosing, testing, and reporting cases for treatment. This progress not only changed patients' lives but also contributed to a stronger, more resilient healthcare system.

Subsequently, Moroto Regional Referral Hospital and Matany Hospital became recognized as kala-azar treatment centres in the country. With ongoing support from DNDi and the Uganda MoH, we trained and mentored teams at these two centres, continuing to build a network focused on the kala-azar elimination strategy set for 2030.

I would like to express my heartfelt gratitude to the Leishmaniasis East African Platform (LEAP) for creating a vital space for collaborative efforts to combat leishmaniasis in Africa. LEAP's tireless work has brought together experts, researchers, and healthcare professionals from across the region, fostering an environment that has accelerated progress in the region and moved us closer to the goal of eliminating this devastating disease.

Through LEAP, and with funding from DNDi, I have had the privilege of connecting with like-minded professionals: with Dr Loyce Faith Nangiro from Amudat Hospital, we became pioneers of a two-week exchange programme in July 2024 in Gondar, Ethiopia, at the Leishmaniasis Research and Treatment Centre (LRTC) at Gondar University. We also visited the Diagnostic and Bioassay Laboratory at Tikur Anbessa Specialized Hospital in Addis Ababa and spent time at the Kenya Medical Research Institute (KEMRI) and DNDi office. This exchange programme allowed us to share knowledge and learn from each other's experiences in the research, diagnosis, treatment, and management of leishmaniasis. It facilitated the exchange of ideas, best practices, and innovative solutions, ultimately strengthening our collective response to leishmaniasis and other neglected tropical diseases (NTDs).

I am profoundly grateful to DNDi for their unwavering support – which has extended beyond my professional development to my academic pursuits. Their generosity has given me the opportunity to pursue a master's degree in international infectious diseases management at Makerere University—a dream I once thought was beyond my reach.

Through DNDi's sponsorship, I am now enrolled in a valuable programme that will equip me with the advanced knowledge and skills needed to tackle the complex challenges of infectious diseases and NTDs in Africa and around the world. This support is not just an investment in my future but in the future of countless individuals who will benefit from my enhanced expertise.

I am proud to be part of DNDi's vision to build capacity and strengthen healthcare systems in Africa. Their commitment to empowering healthcare professionals like me is a testament to their dedication to improving global health outcomes. Thank you, DNDi, for your unwavering support of neglected populations.

Finally, I want to highlight the commissioning of the new laboratory block at Amudat Hospital on 30 July 2024. This significant milestone was made possible through the generous funding of DNDi, marking a crucial advancement in the fight against leishmaniasis and other neglected diseases in the Karamoja region. The state-of-the-art facility, equipped with cutting-edge laboratory equipment, will revolutionize diagnostic and patient care services at the hospital.

The new laboratory block gives healthcare workers access to advanced diagnostic tools that enable them to accurately identify and manage cases of kala-azar and other diseases more effectively. The improved laboratory capacity will also facilitate research and surveillance activities, further strengthening our response to these diseases.

The impact of the new laboratory block will extend far beyond the walls of Amudat Hospital: patients from across the region will benefit from improved diagnostic services, leading to better treatment outcomes.

DNDi's investment in healthcare infrastructure and capacity strengthening is a testament to the initiative's commitment to the fight against neglected diseases and improving the lives of affected communities.

By

Brenda Adiko

Medical Laboratory Technologist,
Amudat hospital

Former kala-azar patient Tegla Kamurut (left) chatting with her mother, Chepteyo Selina, at their home in Abiliyep Parish, Lopedot Village, Amudat District, Uganda.

A mother's experience with kala-azar

Selena Chepteyo vividly remembers when she almost lost her daughter, Tekla, to kala-azar.

The mother of eight, living in Amudat District, Karamoja sub-region, in Northern Uganda, says that the ordeal is one that she will never forget. Her worst nightmare, as she likes to think of it, started with what she assumed was just an ordinary illness.

Although Tekla had been unwell for a long time, it took Selena at least one month before she took her daughter to the hospital.

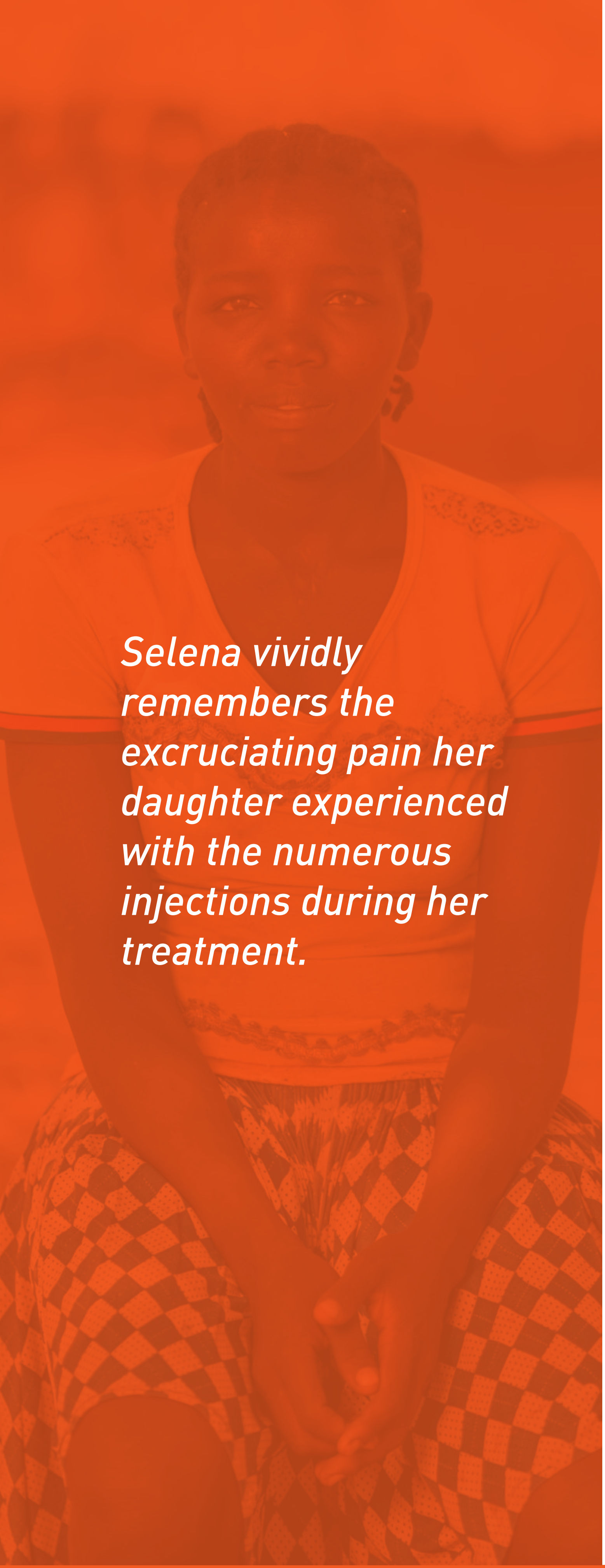
'At that time, I had an infant that needed my attention, and I couldn't just leave her. Tekla was about five or six years old, and I assumed she would just get better. So, I spent about three weeks with Tekla at home when she was sick, and on the fourth week, that's when I took her to the hospital,' she said.

Although Tekla's deteriorating condition prompted Selena to seek professional advice, relief for her daughter was still a long way off.

'Tekla was not improving at home, so I took her to the health centre in Kiwawa to get treated. Despite the treatments, she did not improve, so I took her to Amudat. There, I met with Dr Andrew Munerya, who asked me what was wrong with the child, but I didn't know. He again asked how long she'd been unwell, and I only said, "It's been long". He did some tests, and Tekla tested positive for kala-azar and was admitted to the ward.'

Kala-azar – also known as visceral leishmaniasis (VL) – is a life-threatening disease caused by Leishmania parasites transmitted by female sandflies. VL causes fever, weight loss, spleen and liver enlargement, and, if not treated, death. The disease is reported in nine endemic districts of the Karamoja region.

Selena vividly remembers the excruciating pain her daughter experienced with the numerous injections during her treatment.



> *Selena vividly remembers the excruciating pain her daughter experienced with the numerous injections during her treatment.*

'They began with her thigh, and I could see it was very painful. Oh, I tell you, it was very painful. So, I think one thigh got blocked and then they moved to this other thigh. As if it was not enough, they now went to her buttocks. And then the other buttock. I think the treatment affected her because when I look at her buttocks, I think one is smaller than the other,' explained Selina.

Despite the challenges during Tekla's treatment, Selena is grateful to Doctor Andrew Munerya for saving her daughter's life.

'I'm so grateful that God actually led to the healing of Tekla,' says Selena. 'I could have lost her back then. And as you can see, Tekla is now a grown woman. She even has her own family. And I'm very grateful,' she said.

Selena hopes to see the day when there's a new, simpler, less painful treatment for kala-azar, especially for children – one that doesn't require any injections.

'She was so young back then. If there was a simpler treatment instead of injecting the buttocks and thighs, that would have made the treatment experience much better, but I know that day is coming,' she concludes.

By

Linet Otieno

Head of Communications, DNDi

A researcher at the Leishmaniasis Treatment and Research Centre at the University of Gondar labelling a sample.

Hope for PKDL: New treatment brings us closer to elimination

In a significant advancement in the treatment of post-kala-azar dermal leishmaniasis (PKDL), a clinical trial conducted in Sudan revealed a safer, shorter, and more effective approach compared to the current standard of care. This promising study, spearheaded by DNDi in collaboration with the Institute of Endemic Diseases at the University of Khartoum, was published in the journal ***PLOS Neglected Tropical Diseases*** in November 2023.

PKDL can develop after someone has been treated for visceral leishmaniasis (VL), also known as kala-azar. Most common in Eastern Africa and South Asia, the condition starts with a rash around the mouth and can spread to the arms and upper body, and eventually to the entire body, depending on severity. In Sudan, nearly 20% of VL patients will develop PKDL within six months post-treatment – the highest rate worldwide

In the Phase II trial, which commenced in 2018 in Doka, Sudan, nearly 90% of participants were children aged 12 years or younger. The trial tested two treatment regimens: the first group received a combination of oral miltefosine and injectable paromomycin (MF+PM) for 42 days. Remarkably, patients were only required to stay in the hospital for 14 days during the injectable treatment, allowing them to continue the oral miltefosine at home afterward. At the 12-month follow-up, an astounding 98% of these participants had achieved a complete cure, including those with moderate and mild PKDL.

The second group was administered a regimen of miltefosine and injectable liposomal amphotericin B (MF+LAmB) for 28 days, requiring only a 7-day hospital stay for LAmB treatment before transitioning to home care with oral miltefosine. This group recorded an

Ten-year-old PKDL patient at Kacheliba sub-county hospital in West Pokot.

impressive 80% cure rate, establishing MF+LAmB as a viable alternative treatment.

Currently, the standard treatment for PKDL is sodium stibogluconate (SSG), an injectable drug given for 60 to 90 days, with the potential for life-threatening toxicity when used for an extended period, and requires hospital admission as it must be administered under close supervision.

'Treatment for PKDL in Sudan is currently only recommended for patients with severe or persistent disease, mainly because treatment with SSG is prolonged, toxic, and expensive,' said Prof. Ahmed Musa, Senior Investigator for Leishmaniasis from the Institute of Endemic Diseases, University of Khartoum. 'But we have now found a safer and better treatment option where patients only need to be admitted to hospital for 14 days and then complete the oral treatment at home. This makes it more patient-friendly, which is important since most people affected by this terrible disease are children'.

The World Health Organization (WHO) acknowledges the importance of detecting and treating PKDL as a vital step in eliminating VL as a public health concern. Effective treatment of PKDL could help prevent new cases since the sandflies that transmit VL become infected when feeding on PKDL lesions. One of the targets in the recently launched VL elimination framework for Eastern Africa is to ensure that all PKDL cases are detected, reported, and managed by 2030. The results of the clinical trial led in Sudan therefore support VL elimination efforts in the region.

'For a long time, patients with PKDL in Eastern Africa have been left behind by medical research because the disease is not considered life-threatening. Many have had to endure not only stigma but expensive, lengthy treatments exposing them to toxicity,' said Dr Fabiana Alves, Director of the Leishmaniasis Cluster at DNDi. 'But this new, shorter, better treatment will improve the lives of these neglected patients and also help reduce VL transmission on our road to elimination.'

The results of this groundbreaking study will provide crucial evidence for policymakers, guiding recommendations for new, more patient-friendly treatments. This breakthrough has the potential to transform the lives of those affected by PKDL and pave the way for a brighter future for vulnerable populations.

By

Edith Magak

Communications Consultant, DNDi

Select media mentions (2023-2024)

September 2023

- **Context by Reuters, 5th September 2023:** Africa should bolster research into climate-sensitive diseases.
- **Kenya Broadcasting Corporation, 12th October 2023:** Medical research firm DNDi wins 2023 Spain's Asturias Award.

November 2023

- **The Standard, 18th November 2023:** West Pokot records the highest cases of disease spread by sandflies.

April 2024

- **ALL AFRICA, 23rd April 2024:** Promising patient-friendly oral drug against visceral leishmaniasis enters Phase II clinical trial in Ethiopia.
- **The Ethiopian Herald, 23rd April 2024:** DNDi, partners launch 2nd VL medicine clinical trial.
- **Global Health Now, 23rd April 2024:** A new oral medication to treat visceral leishmaniasis has moved into a Phase II clinical trial in Ethiopia.
- **The National Tribune Australia, 23rd April 2024:** Promising patient-friendly oral drug against visceral leishmaniasis enters Phase II clinical trial in Ethiopia.

June 2024

- **Xinhua, 13th June 2024:** East African countries launch framework to guide kala-azar disease elimination.
- **Health Policy Watch, 26th June 2024:** Framework to help curb visceral leishmaniasis in East Africa.

July 2024

- **Al-Jazeera Arabic, 23rd July 2024:** دخول علاج فموي جديد وواعد وصديق لمرضى الكالازار المرحلة الثانية من التطوير السريري في إثيوبيا (A promising new oral treatment for kala-azar patients enters the second phase of clinical development in Ethiopia).
- **Science Africa, 22nd July 2024:** Eastern Africa: Clinical trial finds new treatment for post-kala-azar dermal leishmaniasis.
- **Sudan Star News, 23rd July 2024:** مركب جديد لعلاج مرض ”الكالازار“ (New compound for the treatment of kala-azar).

August 2024

- **DEVEX, 20th August 2024:** What is kala-azar, and why are health experts alarmed by its rising spread?

September 2024

- **Citizen TV Kenya, 5th September 2024:** OPINION: Leveraging digital tools in the fight to eliminate visceral leishmaniasis in Eastern Africa.

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