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EDITED BY
Richard John Martin,
Iowa State University, United States

REVIEWED BY
Katherine Gass,
Task Force for Global Health, United States

*CORRESPONDENCE
Kelly Zongo
kzongo@end.org

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Toward the elimination of lymphatic filariasis in the Democratic Republic of Congo: progress, perspectives, and strategic directions

Sylvain Mupoyi[1], Jean Kalle Kalenga[1], Kelly Zongo[2,3,4]*, Martha Mberu[2,3,4] and Naomi Pitchouna Awaca Uvon[1]

[1]NTD Department, Programme de lutte contre les maladies tropicales négligées a chimiothérapie préventive de la RDC, Kinshasa, Democratic Republic of Congo, [2]NTD Department, The END Fund, New York, NY, United States, [3]NTD Department, The END Fund, London, United Kingdom, [4]NTD Department, The END Fund, Nairobi, Kenya

The Democratic Republic of Congo (DRC) has achieved important milestones in its national effort to eliminate lymphatic filariasis (LF), a disfiguring neglected tropical disease (NTD) that historically threatened more than 53 million people. Despite persistent challenges related to financing, infrastructure, and geography, the national program has reached 100% geographic coverage of endemic implementation units (IUs) and has successfully transitioned nearly 40% of targeted populations out of mass drug administration (MDA) for LF. This Perspective article highlights this promising progress in the DRC by tracing the trajectory of LF control in the DRC—from early mapping and pilot efforts to nationwide scale-up—and discusses the critical elements enabling this progress, including community engagement, diagnostic innovation, integrated delivery platforms, and strategic partnerships. The article also highlights the urgent need for sustained investment in light of recent global health funding cuts, which risk reversing decades of progress. Finally, it explores the path forward toward achieving WHO's 2030 elimination goal, stressing the importance of data-driven approaches and post-treatment surveillance.

KEYWORDS

lymphatic filariasis, Democratic Republic of Congo, elimination, mass drug administration, neglected tropical diseases, WHO targets, integrated health interventions

1 Introduction

The Democratic Republic of Congo (DRC) stands at a pivotal moment in its fight against neglected tropical diseases (NTDs). After decades of effort, the country has made substantial progress toward eliminating lymphatic filariasis (LF) and reducing the burden of onchocerciasis (OV), particularly through consistent mass drug administration (MDA) and integrated community-based interventions. These gains, however, are precarious.

Ongoing political instability, persistent infrastructure gaps, and most urgently, global funding reductions threaten to undermine hard-won advances.

LF, caused by *Wuchereria bancrofti* and transmitted by mosquitoes, leads to chronic conditions like lymphedema and hydrocele, contributing to significant disability and stigma. The DRC, one of the largest and most densely populated countries in sub-Saharan Africa, has historically carried one of the heaviest LF burdens globally, with over 53 million people at risk before interventions began (1). Despite the challenges posed by its size and diversity, the DRC has demonstrated how progress can be made through strategic alignment with WHO's Global Programme to Eliminate Lymphatic Filariasis (GPELF), launched in 2000.

As the country approaches key elimination thresholds, a new challenge looms: declining international financial support. Recent funding freezes by major donors, including USAID and FCDO, have significantly disrupted NTD programming globally (2). The DRC's experience serves not only as a success story, but also as a stark reminder that progress toward disease elimination is reversible without sustained global solidarity and investment.

2 Historical implementation and strategic planning

Formal efforts to combat LF in the DRC began between 2009 and 2014 with mapping and targeted pilot MDAs. These initial steps were essential to understand the distribution of the disease, especially in light of co-endemicities with *Loa loa* and onchocerciasis (3). Historical prevalence data from the 1990s and early 2000s guided the first LF surveys, many of which identified transmission along riverine areas, including the Kwilu, Kasai, and Itimbiri river basins (4, 5).

During this time, the DRC adopted WHO's two-pronged LF elimination strategy: interrupting transmission through MDA and managing morbidity. The country relied on annual treatment with ivermectin and albendazole in most zones, and biannual albendazole alone in areas co-endemic with *Loa loa*, due to the risk of severe adverse events from ivermectin.

In 2016, the national program launched its first five-year strategic plan for the control of preventive chemotherapy-targeted NTDs (PC-NTDs). It identified four pillars essential to success: expanding geographic and therapeutic coverage, results-based planning and budgeting, national program ownership and leadership, and operational research and monitoring (6). Although progress was impeded by COVID-19 disruptions and constrained domestic financing, this period was critical for building the necessary infrastructure and partnerships for nationwide scale-up.

3 National scale-up and program achievements (2021-2025)

The current national strategic plan (2021–2025) has driven accelerated progress. As of 2024, 91 health zones—home to approximately 21 million people—have successfully completed TAS-1, the first of three Transmission Assessment Surveys used to determine whether MDA can be safely stopped. This milestone signals that these populations no longer require routine LF treatment. An additional 141 health zones are expected to conduct TAS-1 by the end of 2025, leaving just 13 of the original 245 LF-endemic zones requiring continued MDA.

By the end of 2023, more than 40% of the population originally targeted for annual treatment had exited the MDA phase, and this number keeps increasing. The success is attributable to strong therapeutic coverage, efficient drug distribution systems, and effective community mobilization. In 2022 alone, 97% of targeted individuals across the country's 245 endemic IUs received treatment, amounting to over 36 million treatments delivered (7).

4 Integration and community engagement

The DRC's ability to conduct MDA at such scale across one of the most logistically challenging terrains in Africa reflects not just technical capacity, but strategic integration. The program has increasingly used co-delivery platforms to align LF treatment with interventions for onchocerciasis, soil-transmitted helminths (STHs), and schistosomiasis. These integrated campaigns reduce costs and increase efficiency—key benefits in a context of declining international support.

The national program's commitment to integration extends beyond disease control. LF MDA campaigns are often co-timed with school-based deworming, seasonal malaria chemoprevention, and bed net distribution for malaria vector control—particularly important since Anopheles mosquitoes are vectors for both malaria and LF in many areas (3). These synergistic platforms have improved community-level efficiency and enhanced trust in public health efforts.

Crucially, this progress would not have been possible without the mobilization of over 70,000 community drug distributors (CDDs), many of whom serve voluntarily or for nominal compensation. These frontline health workers are the linchpin of the LF program, ensuring high treatment coverage and continuity even in conflict-prone or remote regions. Their deep engagement has been critical for achieving coverage above the 65% minimum recommended by WHO for MDA success.

Support from international partners—including ESPEN, The END Fund, USAID, CBM, and others—has enabled the DRC to scale effectively. These partners have not only provided funding, but also technical support, data tools, and capacity building, which have strengthened the country's NTD infrastructure overall.

Diagnostic innovation has also played a critical role. Antigen-based rapid diagnostic tests (RDTs) have significantly improved the program's ability to conduct accurate TAS and make data-driven decisions about when to stop MDA. These tools allow for efficient sampling and rapid confirmation of interruption of transmission, which is especially vital in hard-to-reach or conflict-affected areas (1).

5 Cross-cutting risks: onchocerciasis and the precarity of progress

While lymphatic filariasis (LF) control has made significant progress, the gains achieved in onchocerciasis (OV) control have benefited indirectly from the LF program's mass drug administration (MDA) with ivermectin. In 2024, 83 health zones in the DRC are considered co-endemic for LF and OV. Five of these zones are scheduled to conduct TAS-1 in 2025, while 67 have already passed TAS-1 and stopped LF treatment. However, in 21 of these zones, the onchocerciasis status remains uncertain. The DRC's Onchocerciasis Elimination Committee (OEC) has recommended continued ivermectin treatment in these areas until entomological and epidemiological data can confirm the interruption of onchocerciasis transmission.

To address these uncertainties, the DRC's National NTD Control Program plans to conduct pre-stop MDA surveys in 142 health zones that have been receiving ivermectin MDA and to prioritize onchocerciasis elimination mapping (OEM) in zones where LF treatment has ended and where the onchocerciasis endemicity status remains unknown. However, funding for OEM has been deprioritized globally as global health funding dwindles, making it challenging to move ahead in this area. These efforts are vital to ensure that OV gains are not reversed in areas where IVM treatment is being recommended to stop due to lingering or undetected OV transmission. The DRC plans for black fly larval habitat mapping and post-treatment surveillance in affected provinces in 2025 in an effort to move the needle and sustain momentum forward. However, sustaining such granular surveillance requires consistent funding and logistical support—two areas now threatened by international donor volatility.

6 The threat of global health funding cuts

Despite the DRC's success, the global context presents significant challenges. In early 2025, the United States enacted a 90-day freeze on foreign aid, including a stop-work order for USAID, which funds many LF and NTD initiatives. After this 90 day freeze, USAID terminated its NTD programs. Simultaneously, longstanding contributors like the United Kingdom have reduced their overseas aid budgets, including NTD-specific programs. While the DRC was not receiving direct funding from the United States Government for its NTD programs in 2025, these changes are already reverberating through supply chains, workforce retention, and surveillance activities in all countries as the global health funding communities strategizes to see how to cover critical gaps while not stalling momentum in other places (2).

For the DRC—one of the world's most resource-constrained environments for health service delivery—this shift could be devastating. Programs built on years of investment are now operating under significant uncertainty. Without a predictable financial base, the ability to complete TAS, scale OEM and OV pre-stop surveys, and sustain post-treatment surveillance will be compromised. The risk of resurgence is real.

The implications go beyond national borders. NTDs like LF and onchocerciasis do not respect geographic boundaries, and any setback in a large, interconnected country like the DRC risks disrupting elimination timelines across Central and West Africa.

An editorial by Bockarie et al. (2) underscores the urgent need for sustainable and diversified financing. As donor priorities shift and multilateral funding wanes, countries like the DRC must look inward. Expanding domestic financing, fostering public-private partnerships, and mobilizing regional donors like the Aliko Dangote Foundation are potential pathways. However, these take time—and time is a luxury not afforded to elimination timelines.

7 Discussion

The DRC's trajectory illustrates that elimination of LF is not only possible, but increasingly within reach—even in complex, post-conflict environments. Achieving 100% MDA geographic coverage, transitioning over 90 zones to post-treatment surveillance, and planning for near-total national coverage of TAS by 2025 are unprecedented feats. Yet, they must be protected.

In the current global funding landscape, the sustainability of these gains is fragile. Without renewed commitment from bilateral and multilateral donors, elimination targets may be missed. The shifting priorities of major funders, combined with rising geopolitical tensions, threaten to deprioritize diseases that largely affect the world's poorest populations—despite their outsized impact on health, education, and economic productivity.

This moment calls for urgency. The global community must view LF elimination in the DRC not only as a local health achievement, but as a regional and global public good. Reaching elimination by 2030 will require accelerating TAS, expanding OEM, fortifying health information systems, and ensuring uninterrupted medicine supply chains.

8 Conclusion

The Democratic Republic of Congo has demonstrated exceptional progress in its battle against lymphatic filariasis. Through years of strategic planning, local leadership, community engagement, and donor support, the country has achieved 100% MDA coverage, transitioned millions out of treatment, and laid a solid foundation for post-treatment surveillance.

However, this progress hangs in the balance. The global community must recognize this moment as a turning point. Ensuring elimination will require sustained investment—not only to maintain current efforts, but to finish the job. The DRC's success story is a testament to what is possible when science, strategy, and solidarity align. Now, more than ever, the world must rally to protect and advance this progress.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material. Further inquiries can be directed to the corresponding author/s.

Author contributions

SM: Conceptualization, Formal analysis, Writing – original draft, Writing – review & editing. JK: Conceptualization, Data curation, Validation, Writing – original draft, Writing – review & editing. KZ: Conceptualization, Formal analysis, Methodology, Project administration, Writing – original draft, Writing – review & editing. MM: Project administration, Writing – original draft, Writing – review & editing. NA: Conceptualization, Formal analysis, Methodology, Project administration, Supervision, Validation, Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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The author(s) declare that no Generative AI was used in the creation of this manuscript.

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