



POLICY BRIEF

Enhancing Treatment Access for Lymphatic Filariasis Morbidities: Developing a National Reporting System for Improved Care

Key messages

- Lymphatic filariasis (LF) is a neglected tropical disease that affects over 51 million people globally, causing lymphedema and hydrocele.
- In Tanzania, there is a lack of a system to track cases of LF morbidities, especially in hard-to-reach areas.
- Improving the reporting system has been shown to enhance the detection of cases, leading to better access to the treatment of LF.
- Mobile phone-based technology has demonstrated its effectiveness in capturing and reporting LF morbidities in real time, improving the timeliness and accuracy of data collection.
- The Ministry of Health should enhance reporting systems for better treatment access of LF Morbidities

EXECUTIVE SUMMARY

Lymphatic filariasis (LF) is a neglected tropical disease that affects millions of people globally, causing lymphedema and hydrocele. One of the main challenges is the lack of an effective reporting system,

especially in hard-to-reach areas, to track and quantify LF morbidity cases. In our study, we found improving the reporting system enhances the detection of cases, leading to better access to the treatment

of LF and that use of mobile phone-based technology was shown to be effectiveness in capturing and reporting LF morbidities in real time, improving the timeliness and accuracy of data collection. This policy brief emphasizes the need to improve the reporting system for LF morbidities to enhance treatment access. The

THE PROBLEM

LF is a debilitating neglected tropical disease that affects millions of people worldwide, with a significant burden in Africa and specifically in Tanzania. LF causes severe morbidities such as lymphedema and hydrocele, which can progress to elephantiasis. These conditions lead to poverty, discrimination, incapacity, discomfort, and social stigma for those affected. The World Health Organization (WHO) launched the Global Program to Eliminate LF (GPELF) in 2000, aiming to eliminate LF as a public health problem by

recommended policy option is to develop a national system for tracking LF morbidity cases, utilizing a mobile-based application for Community Health Workers (CHWs) to report cases in real-time. This system would enable timely identification and treatment of LF morbidities, ensuring better access to care for affected individuals.

2020, now revised to 2030¹. While progress has been made in interrupting LF transmission, the management of LF morbidities, particularly lymphedema and hydrocele, has not received sufficient attention. This has resulted in inadequate access to appropriate treatment and care for individuals suffering from these conditions. One significant challenge hindering effective management is the lack of an accurate reporting system to track and quantify LF morbidity cases. The absence of an exact number of individuals suffering from LF

morbidities worldwide, especially in Africa and Tanzania, makes it difficult to assess the true burden of the disease and allocate appropriate resources for treatment and prevention. Without a reliable reporting system, it becomes challenging to calculate the proportion of individuals with LF morbidities and identify the areas where interventions are most needed. Furthermore, reporting systems have proven to be problematic in various settings. In Tanzania, for example, there is a lack of a tracking system for LF morbidities, especially in hard-to-reach areas where the disease is prevalent. This leads to underreporting and a lack of comprehensive data on LF morbidity cases, hindering the effective planning and implementation of interventions. Similar challenges have been observed in other endemic countries, exacerbating the

global policy gap in LF morbidity reporting¹.

Data Collection: We reviewed literature and collected primary data^{2,3} through qualitative research methods, specifically Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs). The study was conducted in Kilwa district, Tanzania, between December 2019 and January 2020. Kilwa was purposively selected as a hotspot for LF transmission. A total of 300 Community Health Workers (CHWs) participated in the research. The CHWs received training from clinicians on quantifying and reporting LF morbidity cases using text messages¹. The KIIs and FGDs allowed for in-depth exploration of the challenges faced in the current reporting system and provided insights into potential solutions. The study found that improving the reporting system enhances the detection of cases, leading to better access to the treatment of LF and that use of mobile

phone-based technology was shown to be effectiveness in capturing and reporting LF morbidities in real time, improving the timeliness and accuracy of data collection. By employing a combination of literature review and primary data collection through qualitative research methods, a comprehensive understanding of the challenges in reporting systems for LF morbidities and potential policy options was achieved. The research findings and insights from the methodology informed the development of the policy options presented in this brief.

Policy Gap: The policy gap lies in the absence of a national system for tracking LF morbidities and the lack of a reliable reporting mechanism. The current reporting systems are inadequate, particularly in hard-to-reach areas, and fail to capture the full extent of LF morbidity cases. This hampers efforts to identify and provide

timely care for affected individuals, resulting in a significant gap in treatment access.

POLICY OPTIONS AND IMPLEMENTATION CONSIDERATIONS

Policy Option 1: Develop a National System for Tracking Cases of LF Morbidities

To address the current gap in reporting and management of LF morbidities, it is recommended to develop a comprehensive national system. This system should include the following components:

Mobile-Based Application:

Create a user-friendly mobile-based application specifically designed for CHWs to report LF morbidity cases in real time. This application will streamline data collection and reporting processes, enabling prompt and accurate information gathering from remote areas.

Centralized Database:

Establish a centralized database to collect and analyze data on LF morbidity cases reported by CHWs. This database will serve as a reliable repository of information, accessible to healthcare providers, policymakers, and researchers. It will facilitate comprehensive monitoring, evaluation, and analysis of LF morbidities at a national level.

Feedback Mechanism:

Implement a feedback mechanism within the system to ensure effective communication between CHWs and healthcare providers. This will enable CHWs to receive updates on the cases they report and the actions taken by healthcare providers, promoting timely interventions and follow-ups for individuals with LF morbidities.

While considering the costs and sustainability of this system, it is important to recognize that the potential benefits outweigh the investment. The initial expenses will involve the

development and customization of the mobile-based application, the establishment of the centralized database infrastructure, and training for CHWs and healthcare providers. Ongoing costs will include data management, system maintenance, and regular updates.

To ensure the long-term success and sustainability of the system, it is crucial to integrate it into existing healthcare systems and establish clear governance structures and responsibilities. To integrate the reporting system for lymphatic filariasis (LF) morbidities into existing healthcare systems and establish clear governance structures and responsibilities, the following steps should be taken:

- i. Engage key stakeholders and establish coordination mechanisms.
- ii. Align the reporting system with national health policies.
- iii. Invest in infrastructure development, including a

- centralized database and mobile-based application.
- iv. Conduct comprehensive training programs for healthcare providers and relevant personnel.
 - v. Develop standardized operating procedures for data collection and reporting.
 - vi. Establish a monitoring and evaluation framework for continuous improvement.
 - vii. Allocate sufficient financial resources and develop a comprehensive financial plan.

By adopting this policy option, we can enhance LF control efforts and significantly improve access to care for individuals affected by LF morbidities. It will contribute to the overall well-being of affected communities and advance progress toward the elimination of LF as a public health problem in the country.

Policy Option 2: Strengthen Community Health Worker (CHW) Involvement in LF Control Program

Provide comprehensive training to CHWs on the identification, quantification, and reporting of LF morbidity cases. This training should also cover the management of LF morbidities and the referral of cases to healthcare facilities. Develop a supervision and mentoring program to support CHWs in their roles. This program should provide regular feedback and support to CHWs to improve their performance.

Increase the number of CHWs in endemic areas to improve LF morbidity case reporting coverage.

Policy Option 3: Adopt and Scale-up Mobile phone-based text messages by CHWs intervention

The Ministry of Health should consider scaling up the use of this technology for routine workflows such as data collection and reporting, patient-to-provider communication, decision-making, and supportive supervision in the health

system to improve the efficiency and overall performance of end-users. A study published in the Journal of Medical Internet Research found that mobile phone-based technologies can also improve the quality of care, increase patient satisfaction, and reduce healthcare costs³.

Policy Option 4: Invest in Community Health Workers' training

The Ministry of Health should provide training to Community Health Workers (CHWs) on the use of mobile phone-based text message technology, particularly for Lymphatic Filariasis morbidity surveillance.

The training should include teaching CHWs how to collect and report data using the

The authors

Abdallah Ngenya¹, Ndekya

Oriyo¹, Michael Munga¹,

Rafikieli Ngwatu¹, Winfrida

John¹, Akili Kalinga¹

technology and how to interpret the data collected. Evidence supports the importance of training CHWs in mobile phone-based text message technology, with a study published in the Journal of Medical Internet Research highlighting that training in the use of mobile phone-based technologies can improve their knowledge and skills in data collection and reporting, as well as increase their job satisfaction and motivation².

Competing interest

The author declares that he has no competing interests.

Acknowledgments

The development of this policy brief was supported by NIMR Headquarters through DG Office.

¹National Institute for Medical Research, Tanzania

Correspondence: Abdallah Ngenya@2023

Edited by: Dr Elizabeth H Shayo and Dr George Praygod.

Key references

1. Kalinga A, Munga M, Ngenya A, et al. The viability of utilising phone-based text messages in data capture and reporting morbidities due to lymphatic Filariasis by community health workers: a qualitative study in Kilwa district, Tanzania. *BMC Health Serv Res.* 2022;22(1):924. doi:10.1186/s12913-022-08256-z
2. DeRenzi B, Borriello G, Jackson J, et al. Mobile phone tools for field-based health care workers in low-income countries. *Mount Sinai Journal of Medicine.* 2011;78(3):406-418. doi:10.1002/msj.20256
3. Prgomet M, Georgiou A, Westbrook JI. The Impact of Mobile Handheld Technology on Hospital Physicians' Work Practices and Patient Care: A Systematic Review. *AMIA.* 2009;16:792-801. doi:10.1197/jamia.M3215

Glossary

CHW -	Community Health Worker
FGDs	Focus Group Discussions
GPELF	Global Program to Eliminate Lymphatic Filariasis
KIIs	Key Informant Interviews
LF	Lymphatic filariasis
MDA	Mass Drugs Administration
WHO	World Health Organization
NIMR	National Institute for Medical Research

About the Institute

The National Institute for Medical Research is a public health research institution established by the Act of Parliament No. 23 of 1979 with the mandate to carry out, co-ordinate, monitor and control health research in the United Republic of Tanzania.

