



POLICY BRIEF

Strengthening measures against lymphatic filariasis through electronic capture of disease information by community health workers and integration of indicators in the digital health information system

Key messages:

- Limited data are available on the prevalence of morbidities caused by Lymphatic Filariasis (LF).
- Capturing these morbidities through the indicators available in DHIS2 poses a challenge that is further perpetuated by the scarcity of qualified health personnel in remote settings.
- LF morbidity survey conducted in Kilwa District in 2019 reported a significantly greater number of morbidity cases (1,904) identified electronically by community health workers (CHWs) compared to those reported in DHIS2 (<10) for the same period.
- We recommend reviewing the existing indicators in DHIS2 and integrating additional indicators for LF.
- To address the shortage of qualified health workers in remote settings, we recommend the utilisation of real-time electronic data captured by CHWs to narrow this gap.

Executive summary

Tanzania is an endemic setting for lymphatic filariasis (LF), a disfiguring and disabling disease caused by filarial worms and transmitted by mosquitoes. Despite the

achievements in reducing transmission through mass drug administration (MDA), LF-related morbidities have remained a public health problem. Though morbidity

management is known to alleviate suffering and prevent disability, little has been done to address the LF morbidities and their sequelae for those already suffering in Tanzania. Challenges encountered in providing morbidity management and disability prevention (MMDP) services include the lack of precise information on the prevalence of LF-related morbidities due to a lack of measurable indicators in the district health information system 2 (DHIS2) and understaffing in the remote setting. The success of utilising electronic data capture by community health workers has been documented in recent studies. We recommend reviewing the existing indicators in DHIS2 and including additional indicators for LF. We also propose the utilization of real-time electronic data capture by CHWs. By doing so, it will be possible to map and

quantify the distribution of people suffering from filarial morbidities in Tanzania and therefore facilitate the delivery of MMDP services to the areas where they are needed most in the country. It will be used to identify resources needed to implement MMDP services in the country.

Background

Lymphatic filariasis (LF) is the second leading cause of disability that has remained a global burden targeted for elimination in 2030 by WHO (1). It is caused by filarial worms and transmitted by mosquitoes. As of 2018 around 51 million people were living with LF worldwide (2). Persistence LF transmission has been reported in focal areas in Africa, including Tanzania (2)(3). Achievements has been made to interrupt LF transmission through mass drug administration (MDA) of

Albendazole and Ivermectin worldwide (4).

Common LF-related morbidities that occur late in life are hydrocele and lymphoedema, which lead to social stigmatization, financial hardship, and depression (5). Worldwide, about 40 million people are estimated to have LF-related morbidities (4). The second goal from the WHO NTD roadmap to eliminate LF is to provide morbidity management and disability prevention (MMDP) to those affected by the disease (3). The provision of MMDP services involves identifying and reporting individuals with the disease. However, tracking cases and estimating the disease's burden, particularly in remote communities of resource-limited settings, is becoming difficult due to many factors such as inadequate health professionals, an unreliable

reporting system for LF, and stigma (6). Community Health Workers (CHWs) are often involved in different health activities and interventions within their area (7)(8). Based on recent experiences from vertical disease control and other health programmes, the use of CHWs in collating and reporting health information at the community level is highly recommended.

In LF-endemic areas, many health surveillance and information systems are in place for reporting people with morbidities due to LF. In Tanzania, DHIS2 is the national health information management system used. However, currently DHIS2 does not collect comprehensive data on LF due to missing indicators in the data collection tool (HMIS books 3,10, and 16). Consequently, there is a high rate of underreporting of

morbidities caused by LF targeted for MMDP services (9).

The current reporting system for LF has not been able to utilize CHWs effectively to identify and report morbidity cases at health facilities to access available MMDP services. In situations where CHWs were able to identify individuals, they could comprehensively, accurately, and timely report them to the facilities where MMDP services are available. Recent findings documented that the utilization of electronic tools such as mobile phone-based text messages (MPBTMs) or voice interaction has improved the reporting of LF-related morbidity cases in remote areas through CHWs due to advancements in technology (6) (10).

Policy gap

The national health reporting system (DHIS2) has insufficient measurable lymphatic filariasis indicators that grossly underestimate the magnitude of LF morbidities in the localities resulting in many cases missing access to the available MMDP services. Moreover, the health system has not used CHWs effectively in identifying and reporting individuals with LF morbidities. When CHWs identified individuals, they could comprehensively, accurately or timely report them to central points where MMDP services are available.

Policy options

Policy option 1: Incorporating the LF indicators into DHIS2.

Review and develop new LF indicators for capturing LF morbidity cases and

incorporating them into HMIS books 3, 10, and 16, which covers the community level and outpatients where the LF indicators are missing. It will enable DHIS2 to capture all LF morbidity cases in the country and provide them with access to the MMDP services hence accelerating the elimination of lymphatic filariasis.

Incorporating the LF indicators into DHIS2 is feasible because DHIS2 is the national health information system and surveillance tool. This recommendation is based on experiences from other diseases like Malaria, HIV, and TB. Moreover, it is available and accessible in all health facilities in the country by all healthcare providers.

Policy Option 2: Utilize community health workers to electronically data capture

The Ministry of Health should adopt and scale up the use of electronic tools for routine workflows such as reporting to improve the efficiency and overall performance of CHWs. Based on successes reported in utilizing electronics by CHWs in capturing LF morbidity cases in several studies conducted in Ghana and Tanzania and providing an accurate number of LF morbidity cases in real time despite their poor health-seeking behaviour due to stigma, lack of trust and false beliefs concerning their condition. Using CHWs staying with patients in their localities will be easy for these patients to trust and disclose their complaints and facilitate the provision of MMDP to the affected people. Hence,

accelerate elimination of LF disease in Tanzania.

Feasibility is high because the Ministry of Health and its stakeholders have been using CHWs in different health activities and interventions within their area, have performed well and collected their data electronically or manually.

Implementation consideration

1. The Government, technical experts and stakeholders should work together on reviewing, developing, and incorporating LF indicators into HMIS books by conducting workshops, printing HMIS books, and training the staff on updated versions of HMIS books.
2. Train Community Health Workers (CHWs) in identifying patients and utilizing electronic gadgets

to report cases of Lymphatic Filariasis (LF) morbidity. These equipped CHWs will actively identify and document LF morbidity cases within their designated areas and promptly report them in real-time to the nearest healthcare facilities. Additionally, the activity involves procuring electronic devices such as mobile phones and tablets for efficient data collection and reporting to the DHIS2 system.

Contact details!

Authors; Winfrida John^{1*}, Abdallah Ngenya¹, Mathias Kamugisha², Akili Kalinga¹, Ndekya Oriyo¹, Leonard Masagati¹, Wilfred Mandara¹, Michael Munga¹, Faraja Lyamuya³, George Kabona³, Upendo Mwingira⁴

1- National Institute for
Medical Research (NIMR),
Headquarters, Dar es
Salaam,
Tanzania

2- National Institute for
Medical Research (NIMR),
Tanga Centre, Tanga,
Tanzania

3- Neglected Tropical
Diseases Control Programme
(NTDCP), Dodoma, Tanzania

4- RTI International, USA

Correspondence: Winfrida
John@2023

winfida.john@nimr.or.tz

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Shayo and Dr George
Praygod.

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