



# Prevention, diagnosis and management of podoconiosis

## Developing resilient health systems in Ethiopia

### Background

Podoconiosis is a non-infectious neglected tropical disease (NTD) caused by exposure to volcanic soils. It disproportionately affects poor and marginalised people without access to footwear, such as farmers. In most communities, men and women are equally affected by the disease.<sup>[1]</sup> In Ethiopia, however, women are more exposed as they tend to be less likely to own or wear shoes due to their lower incomes and cultural traditions.<sup>[2]</sup> Podoconiosis, also referred to as ‘endemic non-filarial elephantiasis’, is characterised by disfiguring and disabling swelling (lymphoedema) of the lower leg. The resulting social and economic consequences of the disease are severe — those affected are often unable to work or are ostracised by their communities.<sup>[1]</sup>

Globally, around four million people are estimated to suffer from podoconiosis. Over a third of those affected — 1.5 million — live in Ethiopia, most of whom reside in the central highlands.<sup>[3]</sup> The actual number could be even higher, as the absence of point-of-care tests to diagnose podoconiosis and inadequate knowledge about the disease among healthcare providers may contribute to cases being under-reported.<sup>[4]</sup>

### Country

Ethiopia

### Donor

Malaria Consortium funded

### Length of project

March 2020 – September 2020

### Partners

Federal Ministry of Health, Ethiopia

Health Bureau of the Southern Nations,  
Nationalities and Peoples’ Region (SNNPR)

Podoconiosis has tended to receive less funding than other NTDs.<sup>[4]</sup> As a result, there are significant gaps in the evidence base that urgently need to be filled.

## Project outline and objectives

This research project aims to develop a multi-component intervention to improve prevention, diagnosis and management of podoconiosis and builds on the findings of a 2018 Malaria Consortium pilot study conducted in Ethiopia.<sup>[5]</sup> The project is aligned with the strategic objectives of the National NTD Master Plan, particularly that of strengthening the integration and linkage of NTD programmes with other health programmes (such as malaria; HIV and AIDS; water, sanitation and hygiene; polio eradication, etc.).<sup>[6]</sup>

The project will be implemented in a hospital, a health centre and five health posts and will involve the participation of health workers, health extension workers (HEWs), health development army (HDA) volunteers and community members in the Damot Gale district of Ethiopia's Wolayita zone. Malaria Consortium specifically aims to:

- assess current gaps in the primary healthcare system, with a view to strengthening and integrating the prevention, diagnosis and management of podoconiosis
- determine the community's perception and awareness of podoconiosis, disability and stigma
- co-design and validate intervention process and materials for primary healthcare units and affected communities.

## Activities

To achieve the study's objectives, Malaria Consortium will:

- review the current state of podoconiosis prevention, detection, management and reporting at different levels in the primary healthcare system
- identify gaps and health system barriers, including health workers' capacity to diagnose and manage podoconiosis, as well as supervision, data reporting and recording at primary healthcare levels
- conduct focus group discussions with HEWs, HDA volunteers and community members — including those affected by the disease — to assess how much the community knows about the causes and appropriate management of podoconiosis, as well as to identify barriers to care seeking due to gender stereotypes, disability and social stigma
- develop intervention processes and materials based on the outcomes of the formative phase and validate them in consultation with key stakeholders, including relevant government institutions, research institutes and other partners working on podoconiosis
- pre-test intervention materials and processes with potential end users — health workers, HEWs, HDA volunteers and community members
- communicate these intervention materials and processes to key stakeholders through the national NTD Task Force biannual meeting and produce research briefs.

## References

1. World Health Organization. Podoconiosis: Endemic non-filarial elephantiasis. 2020 [no date; cited 2020 Apr 04]. Available from: [www.who.int/lymphatic\\_filariasis/epidemiology/podoconiosis/en/](http://www.who.int/lymphatic_filariasis/epidemiology/podoconiosis/en/).
2. Kelemework A, Tora A, Amberbir T, Agedew G, Asmamaw A, Deribe K, et al. 'Why should I worry, since I have healthy feet?' A qualitative study exploring barriers to use of footwear among rural community members in northern Ethiopia. *BMJ Open*, 2016; 6(3).
3. Deribe K, Cano J, Newport MJ, Golding N, Pullan RL, Sime H, et al. Mapping and modelling the geographical distribution and environmental limits of podoconiosis in Ethiopia. *PLoS Neglected Tropical Diseases*, 2015; 9(7).
4. Deribe K, Negussu N, Bosco MJ, Davey G. Podoconiosis research to implementation: A call for global action. *The Lancet Global Health*, 2018; 6(9).
5. Malaria Consortium. Strengthening primary healthcare for neglected tropical diseases in Ethiopia. London: Malaria Consortium; 2018. Available from: [www.malariaconsortium.org/resources/publications/1190/strengthening-primary-healthcare-for-neglected-tropical-diseases-in-ethiopia](http://www.malariaconsortium.org/resources/publications/1190/strengthening-primary-healthcare-for-neglected-tropical-diseases-in-ethiopia).
6. Ministry of Health. Second Edition of National Neglected Tropical Diseases Master Plan for Ethiopia. Addis Ababa: MoH; 2016.

## © Malaria Consortium / April 2020

Unless indicated otherwise, this publication may be reproduced in whole or in part for non-profit or educational purposes without permission from the copyright holder. Please clearly acknowledge the source and send a copy or link of the reprinted material to Malaria Consortium. No images from this publication may be used without prior permission from Malaria Consortium.

UK Registered Charity No: 1099776

Contact: [info@malariaconsortium.org](mailto:info@malariaconsortium.org)

Cover image: Farmer heaves an ox-drawn plough through a field, Ethiopia

 **FightingMalaria**  
 **MalariaConsortium**  
[www.malariaconsortium.org](http://www.malariaconsortium.org)



**malaria  
consortium**  
disease control, better health