

## Understanding the epidemiological and social factors of lymphatic filariasis persistence fifteen years into the MDA program: towards a successful and sustained disease elimination in Ghana

Corrado Minetti<sup>1\*</sup>, Lisa Reimer<sup>1</sup>, Margaret Gyapong<sup>2</sup>, Mike Osei-Atweneboana<sup>3</sup>, Nana-Kwadwo Biritwum<sup>4</sup>

<sup>1</sup>*Department of Vector Biology, Liverpool School of Tropical Medicine, Liverpool, UK;* <sup>2</sup>*Centre for Health Policy and Implementation Research, Institute for Health Research, University of Health and Allied Sciences, Ho, Volta Region, Ghana;* <sup>3</sup>*Council for Scientific and Industrial Research, Accra, Ghana;* <sup>4</sup>*Neglected Tropical Diseases Programme, Ghana Health Service, Accra, Ghana.*

\*Presenting author. E-mail for correspondence: [corrado.minetti@lstmed.ac.uk](mailto:corrado.minetti@lstmed.ac.uk)

Lymphatic filariasis (LF) is a debilitating mosquito-borne infection. The Ghana LF Elimination Programme has achieved tremendous success in using mass drug administration (MDA) to interrupt LF transmission and MDA has now been stopped in most country districts. However, so-called LF 'hotspot' communities where infection prevalence remains above the elimination threshold persist in a few districts. To achieve and sustain effective LF elimination, it is pivotal to address the epidemiological, social and programmatic factors which may hinder the current elimination programme efforts and future sustainability of elimination and to develop alternative and refined strategies to reach this goal. As part of the COUNTDOWN research consortium, which aims to investigate cost-effective and sustainable solution to control and eliminate helminth NTDs, we used a quantitative and qualitative multidisciplinary approach to study the epidemiological and social characteristics of 8 rural communities in the Western and Northern Region of Ghana where MDA is still ongoing. Parasite prevalence was assessed in adults using both antigen and microfilaria detection as well as reported cases on lymphedema and/or hydrocele. Focus group discussions and in-depth interviews were carried out with purposively sampled men and women in the communities, people not taking drugs during the MDA, community health workers and disease control officers to explore the knowledge, perceptions and challenges related to LF, the MDA program (logistics, access to drugs, treatment adherence) and use of bed nets. Our results are discussed under the light of generating important evidence to improve community knowledge and participation to refine the LF elimination program in country and across Africa, an essential prerequisite to quickly achieve disease elimination and sustain it in the future.