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## Two decades of public health achievements in lymphatic filariasis (2000–2020): reflections, progress and future challenges

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We are pleased to provide an editorial to introduce this series of articles on the achievements of the Global Programme to Eliminate Lymphatic Filariasis (GPELF) over the last 2 decades. We are delighted that so many of the major players in this journey have agreed to contribute to this supplement, which tracks the successes and identifies the challenges faced over 2 decades of work as well as also looking towards the coming years.

The Royal Society of Tropical Medicine and Hygiene hosted the launch meeting of the programme in January 2000 at its then home, Manson House in London. Manson House was named after Sir Patrick Manson, who is regarded as the ‘father of tropical medicine’ and was both a founding member and the first president of the society. He discovered the early development of *Wuchereria bancrofti* in *Culex* mosquitoes, which was the first proven demonstration of the role that insects might play in the transmission of pathogens. The proceedings of that meeting were published in the Transactions of the Royal Society of Tropical Medicine and Hygiene later that year (Molyneux et al 2000).<sup>1</sup> It is interesting to reflect how over what seems such a short time, the science of filariasis has progressed, partnerships have flourished and huge numbers of treatments have been delivered.

The latest figures for lymphatic filariasis (LF) reported by World Health Organization (WHO) in the Weekly Epidemiological Record of September 2020<sup>2</sup> stated that in 2019, 521 million people were treated, a figure for annual treatments that has been consistent over the last decade, with a total of some 12 billion tablets (albendazole, ivermectin and diethylcarbamazine [DEC]) delivered to countries since 2011. The cumulative total number of LF treatments is estimated to be on the order of 7.7 billion since the programme began.<sup>2</sup> In this context, not only have 17 countries been validated as having eliminated LF as a public health problem, many others have seen a dramatic decrease in prevalence as rounds of mass drug administration have achieved scale and high coverage rates.<sup>2</sup>

It is often forgotten that the broad-spectrum efficacy of the drugs in the filariasis programme do not only impact filaria

parasitaemia, but also work against other infections in the neglected tropical disease (NTD) portfolio, notably scabies and soil-transmitted helminths. Indeed, it is not unreasonable to claim the GPELF is the biggest deworming project of them all.

None of these achievements would have been possible without the commitment of the whole LF community, as reflected by the partnership cemented under the Global Alliance for the Elimination of Lymphatic Filariasis (GAELF). This broad partnership includes endemic countries, the WHO, non-governmental development organizations (NGDOs), pharmaceutical and bilateral donors, academic institutions and their research sponsors and private philanthropy (notably the Bill and Melinda Gates Foundation and the END Fund). Each of these partners brought together their unique skills and expertise to ensure that the whole alliance was greater than the constituent parts and forged GAELF into a committed community that is still working to continually advance the goal of global elimination over the next 10 y, aligned with our commitment to the WHO NTD Road Map.

The idea for a supplement to recognise the 20th anniversary of the GPELF began in October 2019. This was made possible by the generosity of our pharmaceutical partners with the assistance of the Royal Society of Tropical Medicine and Hygiene, International Health and Oxford University Press.

The topics of the papers and their authorship reflect the various critical themes of the many and diverse issues facing the LF programme. It is appropriate to ‘begin at the beginning’ and have for the record insights into the origins of the programme. We then follow with a series of papers on the regional successes and challenges, to clearly note the diversity of the epidemiology and ecogeography of the disease. As our authors discuss, successful LF interventions must be tailored to local settings, urban vs rural, ecology of transmission, co-endemicity with onchocerciasis and loiasis, drug distribution modalities and cultural factors. As the saying goes, ‘one size does not fit all’—hence the need for a regional perspective provided by authors who have been directly involved with WHO in regional programme

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activities. The final papers cover broader topics such as economics; the roles of communities, pharmaceutical companies, NGOs and IDA therapy (triple drug therapy); how monitoring and evaluation were undertaken and morbidity management and disability prevention (MMDP). These are each authored by experts who have been intimately involved in the programme for many years. We are indebted to them for the time they have taken to contribute to the supplement and for their individual contributions to what remains a highly successful global public health endeavour.

The LF programme represents a major contribution to unlocking the poverty cycle in many communities, seeks to leave no one behind and is fully compatible with universal health coverage principles. Many millions of individuals are free of disability, with the stigma that symptoms bring, and can be productive and live more fulfilling lives without the burden this disease places on families. Millions of disability-adjusted life years have been averted (de Vlas et al 2016).<sup>3</sup> It is the impact on people that is the fundamental principle of this programme.

We hope our readers will find these papers to be an important record of the achievements of the past 20 y while providing a reminder of the challenges the final stages of the programme will face, particularly as NTD programmes seek to overcome any delays due to coronavirus disease 2019. The end game is always the most difficult in any elimination or eradication programme, with the emergence of the unexpected and resource challenges brought to the fore. However, since the inception of the programme, the LF community has been able to respond (exemplified by the response to the earthquake in Haiti), limited access due to insecurity [Yemen having been validated free of LF as a public health problem] and the challenges of co-endemicity with loiasis.

We again thank the authors for the time they have spent providing a rich source of information based on their unparalleled experiences and the many reviewers who have contributed to advise on manuscripts. We trust you will enjoy this collection, which we hope will be a reference point for several years to come.

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