

Defeating neglected tropical diseases in our new world living with COVID-19

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The background behind neglected tropical diseases

Neglected tropical diseases (NTDs) – a group of bacterial, parasitic, viral and fungal infections present in tropical and subtropical regions – affect more than 1.5 billion people globally, nearly 40% of whom live in Africa.¹ Together with malaria, NTDs are responsible for the loss of more than 62,000 disability-adjusted life years (DALYs).^{2,3}

These diseases disproportionately impact the most impoverished communities around the world. Indeed, the term NTDs was coined by Peter Hotez, Alan Fenwick and David Molyneux with the aim of grouping and including the ‘forgotten diseases of forgotten people’ in the Millennium Development Goals (MDGs).⁴

There is no doubt that we now have a better understanding of this group of diseases and the situations that generate them. However, we must not forget that NTDs are intimately linked to poverty, in areas where access to adequate sanitation, clean water and medical care is limited, and where people live near animals and vectors of infectious diseases, such as in remote and rural areas, informal settlements or conflict zones mainly in Africa, Asia and the Americas.

It is no coincidence that the majority of the burden of these diseases is in ‘neglected and impoverished communities’. Hence, it is imperative that we understand and address these diseases from a biosocial approach and not only from a biomedical and epidemiological perspective, which often ignores the social, economic and political factors that drive poor health outcomes.^{5,6}

From a biosocial perspective, it is possible to identify the social, natural and anthropogenic causes that facilitate the appearance and interaction of

various risk factors and diseases within synergetic epidemics (syndemic), in such a way that the interaction of all these factors and more than one NTD contributes significantly to the burden of disease in the most impoverished populations.⁷

Achievements and projections before the COVID-19 era

Although the political agenda focussed on the eradication of NTDs has made significant progress, there is still much to be achieved. For example, of this group of NTDs, by 2020 the global agenda targeted Guinea worm disease for eradication, as well as blinding trachoma, human African trypanosomiasis, leprosy and lymphatic filariasis for elimination.^{8,9} However, despite the enormous progress, we will not reach some of the targets set for 2020 and, at the current pace, we are far from meeting the 2030 goals.

Regarding eradication, only 96% of countries have been certified as free of transmission for Guinea worm disease by 2020, and the goal for 2030 is to certify the remaining 4%. Yaws, which is targeted to be the second NTD to be eradicated, currently has been cleared from only 1% of the countries. Concerning elimination, no country has interrupted the transmission of human African trypanosomiasis (62% is the goal for 2030), and only 12% and 26% of the countries have been declared free from local transmission for onchocerciasis (31% is the goal for 2030) and leprosy (62% is the goal for 2030), respectively. Contrastingly, blinding trachoma (14% in 2020 *versus* 100% in 2030) and lymphatic filariasis (26% in 2020 *versus* 81% in 2030) have been targeted for elimination as a public health problem. Major public health efforts and global commitments from public and private parties to guarantee that these goals can be achieved in every

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country must be implemented to pass from optimistic to realistic targets.⁹

Challenges and perspectives during the COVID-19 era

We must consider the dynamic changes of global factors such as climate change, global warming, and the socio-economic changes that currently affect the world in part due to the recent SARS-CoV-2 (COVID-19) pandemic, which at this time is currently spreading around the world, and we are particularly concerned about its impact in low and middle-income countries (LMIC) and vulnerable communities.

The interaction between COVID-19 and NTDs should not go unnoticed. At this time, it is well known that the severity and mortality due to this new pandemic are associated strongly with general health conditions such as nutritional status and age, which are also risk factors that accompany infections by this group of NTDs and malaria.¹⁰

On the one hand, the prevention strategies for COVID-19 (e.g. physical distancing, the use of face coverings, handwashing, emphasising good hygiene, use of clean water and adequate sanitation) are achieving a global impact and are consistent with elementary prevention measures for NTDs. However, although access to water and sanitation measures are recognised as a human right, there are still many vulnerable populations that do not have access to these measures. Physical distancing is also extremely challenging to implement for communities living in crowded environments such as refugees camps.¹¹

It is important to stress this situation for the global agenda, and also consider that the COVID-19 pandemic has caused the partial or total interruption of various health programs, where the global NTDs agenda is not an exception. For instance, in April 2020, the World Health Organisation (WHO) published the 2030 road map for NTDs, which aims to guide the global agenda to achieve the Sustainable Development Goals (SDG) on NTDs.⁹ However, in the same month, The Department of Control of NTDs recommended to postpone community-based surveys, active case-finding activities and mass treatment campaigns for NTDs until further notice,¹¹ with a recent update in July 2020, where

the WHO recommends to conduct risk/benefit and health system capacity assessments based on their respective COVID-19 context with the purpose of resuming programs according to each capacity.¹²

Undoubtedly, strategies for the control, elimination and eradication of NTDs continue to gain an essential presence on the global agenda; however, it is necessary to reinforce the commitment and continuous support at the highest level within each country, as well as at the regional and international level by following the agreements made in the London Declaration on Neglected Tropical Diseases.⁸

To achieve these targets, several measures need to be taken into consideration, such as implementing permanent awareness campaigns, increasing appropriate vector control management, and developing cheap and reliable diagnostic tools, as well as safe and effective drugs and vaccines. However, most importantly, integrating acute and chronic diseases prevention and control strategies in a unified health system will improve the prognosis and outcomes of patients.

COVID-19 is changing the world and the massive societal responses to the pandemic risk undermining efforts on NTDs. We must remain vigilant to keep NTDs on the global agenda and maximise synergies between the NTD and COVID-19 responses to advance the SDGs and ensure that no one is left behind.

Author contributions

LAMJ and DAAH conceived of and designed the editorial, LAMJ, DAAH, ACS, JS and PP helped to draft and review the manuscript for important intellectual content. All authors read and approved of the final version of the manuscript.


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