

Neglected Tropical Diseases

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Background

Health and wealth have had disturbing historical links. This relationship is particularly discernible with 'Neglected Tropical Diseases' or 'NTDs'. The World Health Organisation (WHO) defines NTDs as 'a diverse group of communicable diseases that prevail in tropical and subtropical conditions'. (1) NTDs affect a staggering 1 billion of the world's poorest people across 149 countries; (2) otherwise known as the 'bottom billion'. (3)

Coined in 2000, the term 'neglected' pertains to these diseases because they 'persist only in the poorest, most marginalized communities and conflict areas' (2) despite being largely eradicated in higher income countries. With over 20 different diseases listed by WHO, examples include Chagas disease, dengue and chikungunya, leishmaniasis, leprosy (Hansen's disease), lymphatic filariasis, rabies, scabies, and schistosomiasis, with more diseases added to the portfolio every year. (1)

The most severely affected are populations blighted by 'poverty, inadequate sanitation, and that are in close contact with infectious vectors including domestic animals and livestock'. (1) WHO believes that this is due to a lack of awareness, unreliable statistics, and these unprofitable diseases being low on public health and political agendas. (4, 5) NTDs are worryingly prevalent, but surprisingly controllable.

What works?

NTDs are finally being addressed on a global scale because they are now an explicit part of the Sustainable Development Goals (SDGs), which outline global priorities for the next decade. Furthermore, in 2012, WHO published its 'NTD Roadmap' describing how it hopes to eradicate or eliminate 17 NTDs and proposals achieve these targets by 2020. (6) This led to the 2012 London Declaration on NTDs and creation of 'Uniting to Combat NTDs', (7) illustrating how pharmaceutical companies, governments and non-government organisations (NGOs) can indeed unite against the 10 most devastating NTDs, as 7 diseases make up 90% of the disease burden. (2)

Since then, millions have been invested in NTDs. Notable donors include US-AID which donated \$450million in 2010 and another \$175million in 2015, (8) the UK government which has pledged £360 million, (9) as well as the World Bank, the Bill and Melinda Gates Foundation and END FUND. (8) It is believed that as a result of these efforts, 1 billion people were treated for NTDs in 2015 alone. (10) The WHO report 'Integrating Neglected Tropical Diseases in Global Health and Development' highlights that further disease control can be achieved through 'strong political support, generous donations of medicines and improvements in living conditions'. (11)

'Mass Drug Administration'(MDA) is 'the treatment of the entire population in a geographical area with a curative dose (of the treatment) without first testing for infection and regardless of the presence of symptoms'. (12) MDAs can be particularly successful, with the example of 'Lymphatic Filariasis' or 'LF' being particularly striking. LF, also known as 'elephantiasis', is a devastating parasitic disease and is the second most

disabling disease in the world after depression. (13) LF was classified as eradicable in 1997, (14) and the World Health Assembly promptly called upon member states 'to eliminate LF as a public health problem through interrupting transmission and controlling morbidity'. (15)

Drug companies GlaxoSmithKline and Merck committed to MDA i.e. 'donating drugs to cover populations determined to be at risk'. (16) Consequently, 556 million people received preventative treatment for LF worldwide (10) and elimination has been achieved in Cambodia, Cook Islands, Maldives, Niue, Sri Lanka and Vanuatu as of 2016. (17)

This example illustrates that once LF was properly researched, identified as a political priority and had investments in the form of savvy drug donations, real progress could result and a reduction in disease burden. The aim of elimination of LF by 2020 now seems more achievable. MDA does not work for every NTD but is thought to be effective for LF, ascariasis, trachoma, hookworm infection, trichuriasis, schistosomiasis and onchocerciasis. The WHO NTD Roadmap emphasizes the need for other strategies such as vector and intermediate host control, veterinary public-health at the human-animal interface and provision of safe water, sanitation and hygiene. (6)

Solutions

Therefore, three key solutions to NTDs are to carry out more research, increase funding and to make NTDs more of a political priority.

Most research begins at universities and medical schools. As students, we have the power to advocate to our institutions that more research is needed in NTDs. NTDs should be a core part of medical curriculums as universities have a duty to educate and inspire students about NTDs as well as provide opportunities to further research these areas. We need reliable and up-to-date information on NTDs as well as reports on whether programmes are working, so that errors can be remedied, and successes can be celebrated. Crucially, research must be implemented in the field as soon as possible to those who need it most, but this requires adequate funding.

The funding required for treatment, prevention and research into NTDs will not be cheap. The elimination of NTDs would not just decrease human suffering but economic benefit as it is believed that for 'every dollar invested in NTD control and elimination, it has an economic return of \$27-\$42'. (7) Donor countries, NGOs, pharmaceutical companies and private philanthropy have been impossibly generous in the war against NTDs however, a Universal Health Coverage system is perhaps more sustainable than altruism. Furthermore, as the WHO NTD Roadmap emphasises, 'sustained elimination is possible only with full access to safe water, water disposal and treatment, basic sanitation and improved living conditions.' (6) Investment cannot just be into medication and treatment but into the infrastructure of endemic countries, particularly to improve sanitation. Prevention is better than cure but the social determinants of ill health including NTDs are complex and will require long-term financial and political investments into tackling poverty.

Motivation must be maintained to ensure that NTDs are a political priority across the world. The proposals made in the WHO's NTD Roadmap are grounded in evidence and even inspired the London Declaration. This inspiration must continue in the form of

governments endorsing and carrying out these proposals. Through campaigns and petitions SFGH can generate awareness and pressure our government to acknowledge NTDs as a serious political issue which requires investment towards disease prevention, treatment, and research. SFGH can educate members about NTDs through conferences and talks.

Finally, many goals for NTDs are given the deadline of 2020. However, considering that is just two years away, what happens next? We need a clear agenda for beyond 2020 but this again requires research, funding and political drive.

Conclusions

Whilst NTDs continue to cause a great deal of suffering to the world's most vulnerable people, valuable lessons have been learnt about what can be done to improve the situation. Through increasing research, funding and the political importance of NTDs we can hope to overcome one of the greatest global health challenges that faces our world today. The gravity of giving NTDs the time, money and awareness they deserve cannot be stressed enough, as this is an issue that affects at least 1 in 6 of the world's population. (10) NTDs must be addressed in order to achieve a world in which equity in health is a reality for all.

Calls to Action

1. Students for Global Health should:
 - a. Raise awareness and educate about NTDs by running training sessions, events and talks at national events such as conferences.
 - b. Advocate and campaign for more opportunities to research NTDs.
 - c. Campaign, and create petitions to lobby pharmaceutical companies to invest more into the research of NTDs and donate medication in general and for mass drug administration, alongside organisations such as Universities Allied for Essential Medicines.
 - d. Campaign and create petitions to pressure the government to acknowledge NTDs as a serious political issue which requires investment towards disease prevention, treatment and research.
 - e. Consider the partnership with other organisations to make statements.
2. Branches and members should:
 - a. Ensure that NTDs are included as part of the core curriculum of teaching at their institutions.
 - b. Encourage their institutions to invest more funds into research projects on NTDs.
 - c. Encourage their institutions to provide more opportunities for students to research NTDs.
 - d. Raise awareness and educate about NTDs by running training sessions, events and talks at local branches.
3. The UK Government should:
 - a. Acknowledge and make attempts to carry out the proposals made in the WHO's NTDs Roadmap by making financial and political commitments.
 - b. Encourage pharmaceutical companies to endorse the commitments made in the London Declaration on NTDs (2012).

- c. Invest into the latest prevention, treatment and research into NTDs including the scaling up of successful programmes in endemic countries to ensure all those at risk are reached.
- d. Continue in the fight against poverty and invest in infrastructure for adequate sanitation in endemic countries.

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Policy Statement on Neglected Tropical Diseases

Adopted at Spring General Assembly 2018 - Sheffield

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