The World Health Assembly has adopted resolution WHA66.12 on all 17 neglected tropical diseases (NTDs), vowing to make a concerted effort to control and eradicate these conditions. NTDs constitute a major global health burden, limiting economic development, yet still receive far less attention than many of the more well-known infectious afflictions. In the US, for example, of all infectious disease funding in 2009, NTDs were allocated only 10.2 per cent compared with the 71 per cent allocated to the ‘big three’ – HIV, malaria and TB.

While diseases such as malaria undeniably affect an enormous proportion of the world’s population, NTDs still afflict over 1 billion people worldwide and are endemic in 149 countries – many of which are simultaneously burdened by widespread poverty. Is this disparity in funding appropriate, and what changes need to be made to ensure the success of the World Health Assembly’s resolutions?
Fundamental to this issue is the need for low- and middle-income countries to be involved in setting their health research agendas. Those living in the countries where these diseases are prevalent know what is needed, so with the right support they can develop priorities, identify bottlenecks and support research. We need to move away from a model where the decision makers are from the ‘North’ and the recipients are from the ‘South’. Business as usual is clearly not working.

We also believe that there needs to be a broader approach to research – it is not just about the development of new drugs, diagnostics or other tools and strategies – but also how to implement and scale up the use of these important aids. Too many people do not have access to treatments that are available and distributed free of charge. Why is that? What are the obstacles and solutions?

The WHO has been leading a major effort to look at ways to increase R&D among all countries and find innovative funding strategies. There is a need to hear more voices and more ideas. When communities own their research – identify the needs and oversee the work – they take charge of their future. Once we have a more inclusive approach to the problem, we will come up with better and more sustainable solutions.

It was short-sighted to focus donor (ie. Global Fund) attention on HIV, TB and malaria alone because these diseases occur in the context of a suite of many other chronic infections that can’t be ignored. The skewed bias toward the big three is a consequence of the flawed Disability-Adjusted Life Year (DALY) ranking system that was implemented by WHO and the World Bank in the 1990s. The big three get high DALY rankings because they cause high mortality in young children. But this DALY system pretends that a two-year-old child in a resource poor area who is saved from death by malaria would have 84 years of healthy life. This is an obvious mistake, but the myopic bias introduced by the one person/one disease scoring system has exceptionalised the big-three diseases at the expense of adequate investment in control of the many other diseases that afflict poor countries.

I am a little concerned that the issue of NTDs is being pitched against the major infectious epidemic diseases. While that approach may be appropriate for the Organisation for Economic Co-operation and Development (OECD) countries, I feel it is a little misplaced for developing countries. The central issue is about a balance between the two drivers. We should be using the resources available for the vertical systems (malaria, HIV etc.) to develop baseline platform diagnostic/research capacity. This way we could, for example, build the capacity for differential diagnosis of fevers in children on the back of a malaria programme; or use the HIV programme to develop capacity for virological diseases.

Malaria was once a sorely neglected disease – at the turn of the century, it had infected over 300 million people and was killing over a million every year because of rapidly spreading resistance to existing antimalarial drugs and insecticides. The global health community prioritised HIV, TB and malaria, and their initiatives were supported in full by many donor governments. As a result of this global effort and investment, enormous strides have been made in the control of malaria. The latest World Malaria Report states that 3.3 million deaths have been averted since 2000. Yet, an estimated 627,000 lives, mainly young children, fall prey to malaria annually, and those that survive struggle with their physical and mental development all their lives.

There is no doubt that mankind is plagued by many diseases that mainly affect the poor
and are thus neglected by the commercial pharmaceutical industry. Recent developments demonstrate that NTDs are now raising international interest and will surely soon attract greater investment as successes in the control of malaria, TB and HIV require less support. It is not a question of investing in malaria versus investing in NTDs. It is clear that we must not pull back from supporting malaria. We must continue to invest in malaria control and elimination programmes or we will lose the gains we have made in the last decades.

Professor Kevin Kain (University of Toronto, Canada):

It could be argued that the big three are also underfunded. There may be little benefit in taking funds away from one area of huge global health importance to fund another area of need. These decisions are best framed in the context of what is the best way to maximise the impact of research dollars with respect to decreasing global childhood deaths, disabilities and misallocation of scarce healthcare resources. It is also important to note that we currently have an incomplete understanding of the true impact of each of these global infectious diseases and, therefore, decisions of resource allocation need to be continually evaluated in the light of new findings. For example if malaria exposure in utero, even in the absence of a birth phenotype such as low birth weight, is proven to cause long-term neurocognitive and behavioural disabilities, the public health importance of preventing malaria in pregnancy may become a much greater priority; since it may then enable tens of millions of children to reach their intellectual potential, which we feel should be a foundational right.

Dr Christof Kaiser (Baden-Baden, Germany):

All of the diseases mentioned, including the big three, tend to disproportionately affect the poorer parts of a society. This applies to developed and developing countries alike. Thus, all of these diseases are ‘poor diseases’, even if some of them are poorer than others. I think it makes no sense to play off the different poor diseases and their stakeholders, as they are all underfunded and we definitely need more money for them all.

Another relevant aspect is not addressed with this question (although it is mentioned in resolution WHA66.12). Disease-orientated programmes are highly vertical in their organisation and run the risk that those most in need of their benefits are not reached because health services with a required minimal standard do not exist – especially in the periphery of endemic countries. Therefore, stakeholders of these programmes should be aware that they can be more effective if they consider themselves to be part of the entire health system and promote the District Health System approach.

Dr David Reddy (Medicines for Malaria Venture, Switzerland):

MMV believes that funding must increase for the big three diseases as well as for NTDs. It is not a question of funding one and not the other. We have seen from past malaria control efforts that if you take your foot off the gas the parasite returns with a vengeance, negating all gains and taking the lives of an increasing number of people. We simply cannot switch support from one disease to another and must take a more holistic view that includes all diseases. Funding is vital to counter all significant killer diseases.

Yes, this will require policy change. Yes, it will require incentives. No, it won’t be easy. But it must be done.

Dr Michele Spring (Armed Forces Research Institute of Medical Sciences, Thailand):

The positive result of highlighting such a discrepancy is the increased awareness of the impact of NTDs, and thus more discussion on how to address these diseases and improve the environmental conditions in which they thrive (poverty, inequality, etc.). I don’t think the solution lies in trying to perfectly allocate funds per disease per country, or choosing one disease over another. The big three still cause huge morbidity and mortality. Gaining increased support begins with recognition of the devastating impact of these conditions, the factors that contribute to persistence of the problem, and involvement of all
sectors – education, environment, etc. – not just the health sector, to achieve success.

**Dr Erik C Böttger**
(University of Zurich, Switzerland):

If one really wants to tackle NTD, a concerted effort in drug development is urgently required. This has to include all possible levels of research and stakeholder involvement – basic and applied research in academia, heavily supported by institutional grant agencies combined with industry commitment and willingness to invest.

**Rob Mather**
(Against Malaria Foundation, UK):

I am not qualified to say what the relative funding of malaria versus the 17 NTDs should be but I do support significant additional funding into both areas – accountably and transparently spent with information supporting impact outcomes – as these are all health problems on which relatively small amounts of money can have a dramatic impact.

If any of these diseases existed to any extent in most developed countries they would be addressed as a fundamental priority. People living in developing countries deserve the same response.

**Dr Stephen Rich**
(University of Massachusetts, USA):

I think it is important to identify priorities especially where resources are limited and there is urgent need to improve global health. I’m also not sure that scientists (myself included) are the best people to evaluate these priorities since we tend toward myopia when it comes to judging relevance. But if I were pressed to identify some proper determinants of priorities for tropical disease, I would say that we must rely on something more than merely the metrics of morbidity and/or mortality.

**Dr Jaishree Raman**
(National Institute of Communicable Diseases, South Africa):

The WHO resolution to remedy the NTDs versus HIV, TB and malaria funding disparity is long overdue, particularly when the number of people currently affected by NTDs is considered. It is however vitally important in attempting to redress this funding inequality that WHO does not decrease funding for malaria. Such a step could negatively impact the impressive gains made, particularly in Africa. Instead, WHO should consider piggybacking NTD programmes on existing malaria programmes. This would allow for the extremely cost-effective implementation of NTD programmes as they would utilise existing infrastructural and human resources.

**Professor Agrégé Abdoulaye Djimé**
(University of Science, Techniques and Technology, Mali):

Each life saved and each suffering averted is a victory for mankind. Although a lot of efforts were put into the fight against the big three, the road to victory is still very long and bumpy. I don’t think one should reason in terms of decreasing funding from one and increasing it for the other. The international community should rather harness the required resources to effectively fight against both the big three and NTDs.

**References**


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