

G7 Science Academies' Statement 2015:

Neglected Tropical Diseases



Neglected Tropical Diseases (NTDs) are a group of infections that affect mainly the poorest and place an economic burden on low- and middle-income countries. In principle, NTDs are preventable, treatable, controllable and some even eradicable. Moreover, most interventions against NTDs are highly cost-effective. To make progress toward preventing, controlling and eliminating NTDs, the G7 Academies of Sciences call for: (1) increasing efforts to empower and build capacity in affected countries to deal with these diseases, (2) intensifying research on NTDs, (3) developing and delivering affordable and accessible treatments, and (4) NTDs to be fully accounted for in the Sustainable Development Goals.

Neglected Tropical Diseases are a group of parasitic, bacterial, and viral infections that cause immense suffering in more than a billion people. These diseases are characterised by insufficient treatment and care. Of the more than 30 NTDs (including Ebola), WHO prioritises 17 diseases with greatest impact including schistosomiasis, lymphatic filariasis, river blindness, dengue and leprosy. NTDs are endemic in 149 countries of the world, most of them low- and middle-income countries. Most NTDs are chronic and can significantly disable particularly the poorest and most vulnerable individuals, households and communities. NTDs place substantial burden on the health and economic systems in affected countries. Although at present no NTD has been controlled, eliminated, or eradicated, progress on many of the most important of these diseases would be a major step towards alleviating poverty.^{1,2} Still, for many NTDs there are too few effective drugs and some mainstream treatments can have severe side effects.

Some progress has been achieved over the past decade: WHO has increased its commitment to NTDs and a recent report³ calls for increasing domestic investments to reach WHO's Roadmap targets for 17 NTDs by 2020.⁴ These targets are supported by a specific resolution at the World Health Assembly in May 2013.⁵ In addition, private and public sector organisations have committed themselves to controlling, eliminating or eradicating 10 NTDs by 2020, by making long-term donations for drugs (with an annual value of US\$ 2 billion), by advancing R&D, enhancing col-

laboration and cooperation at national and international levels and enabling funding and monitoring programmes.^{6,7,8} Affected countries now place NTDs higher on their agenda and develop national NTD plans.^{9,10} However, resources for research and/or implementation are still insufficient: NTDs receive only 0.6 % of Official Development Assistance for Health.¹¹

Much more needs to be done with a much greater urgency to reach the 2020 targets for all major NTDs. The specificity of diseases as well as the likely adverse impacts of severe climate events, risks of conflicts, increasing mobility/migration, and political instability need to be taken into account when developing strategies for tackling the NTD challenges. NTDs should be fully accounted for in the Sustainable Development Goals.

The following actions are necessary:

1. Increase efforts to empower and build capacity in affected countries

- Invest in empowering national health systems in affected countries, particularly with regard to improving access to treatments and diagnostics to reach universal health coverage. Help the governments of endemic countries in their efforts to inform and raise peoples' awareness on risk factors and prevention of NTDs, taking into account specific cultural practices as well as local and indigenous knowledge.
- Invest in increasing the capacity in endemic countries for surveillance of patients, vectors, pathogens and animal reservoirs. In particular, foster the One Health-approach to address zoonotic NTDs such as leishmaniasis, and African trypanosomiasis (sleeping sickness).
- Promote research cooperation and technology transfer between industrialised and low- and middle-income countries, particularly with the aim to establish research capacities in endemic countries.

1 Resolution of the 66. World Health Assembly, WHA 66.12 "Neglected tropical diseases". 2013.
2 Conteh L et al (2010) Socioeconomic aspects of neglected tropical diseases. *The Lancet* (375): 239-247.
3 WHO (2015) Investing to overcome the global impact of neglected tropical diseases: third WHO report on neglected diseases 2015.
4 WHO (2012) Accelerating work to overcome the global impact of neglected tropical diseases – A roadmap for implementation.
5 Resolution of the 66. World Health Assembly, WHA 66.12 "Neglected tropical diseases". 2013.

6 The Uniting to Combat NTDs coalition (2014) Delivering on Promises and Driving Progress. Report.
7 *Lancet* Editorial (2014) Neglected tropical diseases: becoming less neglected. 38:1269.
8 The London Declaration on Neglected Tropical Diseases (2012). <http://unitingtocombatntds.org/resource/london-declaration>.
9 *Lancet* Editorial (2014) Neglected tropical diseases: becoming less neglected. 38:1269.
10 Molyneux DH (2014) Neglected tropical diseases: now more than just 'other diseases' – the post-2015 agenda. *International Health*. doi:10.1093/inthealth/ihu037.
11 Liese B, Houghton N, Teplitskaya L (2014) Development assistance for neglected tropical diseases: progress since 2009. *Int Health* 6: 162-171.

2. Intensify research on NTDs

- For progress on prevention, control, treatment, and where possible eradication of NTDs, strengthen basic research, particularly on the biology of infectious agents, the host response and the cross-effects with other diseases. Intensify research on transmitting vectors and intermediate hosts and develop new measures for their control. Study animals as a reservoir for pathogens and assess the importance of closely related pathogens in livestock production.
- Study how new technologies can be implemented and increase applied- and programme-oriented research for diseases targeted for elimination or eradication.
- Study the full economic effects of NTDs on individuals, households and nations to provide more effective and equitable targeting of interventions. Develop an agreed-upon metric to measure the effect of interventions.

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3. Develop and deliver affordable and accessible treatments

- Create new and strengthen existing incentives for industry and academia that decouple costs of R&D from the price of products to make treatments for NTDs affordable and accessible.
- Further develop easily usable and affordable point-of-care technologies. For this purpose, strengthen product development partnerships especially with and in endemic countries.
- Support the sustainable delivery of treatments and diagnostics by strengthening supply chains of WHO prequalified products.
- Identify behaviour and conditions that increase the risk of acquiring or exacerbating NTDs. Based on this, develop and provide training and information to the general population.
- Consider as well non-prioritised NTDs and develop clear metrics to measure the effect of interventions.