

# **Neglected tropical diseases**

## **Report by the Director-General**

1. At a meeting of the Officers of the Executive Board it was agreed to recommend the addition to the provisional agenda of an item on neglected tropical diseases.<sup>1</sup> This report is submitted in response to that decision. It provides information on the context, the current situation, progress made since the adoption in 2012 of the road map for accelerating work to overcome the global impact of neglected tropical diseases, and the challenges and opportunities for the next decade.

2. Neglected tropical diseases are a diverse set of currently 20 bacterial, viral, parasitic, fungal and noncommunicable diseases and disease groups that disproportionately affect populations living in poverty, predominantly in tropical and subtropical areas. They remain a public health problem that affects populations left furthest behind by development in the most vulnerable countries and communities. They impose a devastating human, social and economic burden on more than one billion people worldwide.

### **CONTEXT**

3. In 2013, in resolution WHA66.12 the Health Assembly urged Member States “to expand and implement, as appropriate, interventions against neglected tropical diseases in order to reach the targets agreed in the Global Plan to Combat Neglected Tropical Diseases 2008–2015, as set out in WHO’s road map for accelerating work to overcome the global impact of neglected tropical diseases ...”.

4. In 2015, the Sixty-eighth World Health Assembly noted a report<sup>2</sup> on progress towards the elimination and eradication of targeted diseases.<sup>3</sup> Whereas the report documented unprecedented progress towards eliminating some diseases, it showed that only modest reductions had been made in the burden of other targeted diseases, which had continued to spread, making it impossible to reach the targets for 2020. In the same year, Heads of State and Government adopted the 2030 Agenda for Sustainable Development, including target 3.3 of Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages): “By 2030, end the epidemics of ... neglected tropical diseases ...”.<sup>4</sup> Indicator 3.3.5 (number of people requiring interventions against neglected tropical diseases) was developed to measure progress towards the attainment of target 3.3. In 2017, WHO

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<sup>1</sup> See document EB146/1 (annotated).

<sup>2</sup> Document A68/36, section F.

<sup>3</sup> See document WHA68/2015/REC/3, summary records of Committee A, twelfth meeting, section 4, and thirteenth meeting, section 2.

<sup>4</sup> United Nations General Assembly resolution 70/1 (2015).

convened its second global partners' meeting on neglected tropical diseases, 10 years after the first meeting, at which partners made further commitments and pledges of support.<sup>1</sup>

5. In 2019, the United Nations General Assembly resolved in the political declaration of the high-level meeting on universal health coverage to “strengthen efforts to address ... neglected tropical diseases, as part of universal health coverage”.<sup>2</sup> Interventions against neglected tropical diseases have been identified as key contributors to achieving universal health coverage. This is because the mission of control, elimination and eradication programmes on neglected tropical diseases is aligned with the three dimensions of universal health coverage: population (who is covered); services (which services are covered); and direct costs (what proportion of costs is covered). Universal health coverage is one of the three strategic priorities of WHO's Thirteenth General Programme of Work, 2019–2023 (one billion more people benefitting from universal health coverage). National programmes on neglected tropical diseases are already contributing to this goal.

6. Interventions against neglected tropical diseases support the vision of universal, equitable access to health services. National programmes adopt grassroot approaches that enable them to gain access to some of the world's poorest, hard-to reach communities and people affected by natural disasters, conflict and complex emergencies. Programmes provide services that would otherwise not be available to such vulnerable, marginalized communities. Importantly, most services are offered free of charge. As such, national programmes fill an important gap by providing essential health care. The notion of equity is a central element of programmes. Success in overcoming neglected tropical diseases has been suggested as a tracer of equity in access to health services and progress towards universal health coverage, given that these diseases affect the world's most underserved communities.<sup>3</sup>

## CURRENT SITUATION

7. More than 1.5 billion people are estimated to require interventions against neglected tropical diseases each year. At least 200 000 people die each year from snakebite envenoming, rabies and dengue alone. Lack of timely access to treatment and care for neglected tropical diseases leaves hundreds of millions more severely disabled, disfigured or debilitated. These diseases cost developing economies the equivalent of billions of United States dollars each year in direct health costs, lost productivity and reduced socioeconomic and educational attainment.

## PROGRESS

8. Progress against neglected tropical diseases has contributed to alleviating the human and economic burden they impose on those left furthest behind by development. It also demonstrates the impact of aligning the work of Member States and diverse partners, which during the past eight years has established clearly that interventions against neglected tropical diseases are one of the best buys in development, given their contribution to human and economic well-being.

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<sup>1</sup> WHO. Global resolve to end neglected tropical diseases amid unprecedented progress, 19 April 2017 ([https://www.who.int/neglected\\_diseases/news/Global\\_resolve\\_to\\_end\\_NTDs\\_amid\\_unprecedented\\_progress/en/](https://www.who.int/neglected_diseases/news/Global_resolve_to_end_NTDs_amid_unprecedented_progress/en/), accessed 13 December 2019).

<sup>2</sup> United Nations General Assembly resolution 74/2 (2019), paragraph 34.

<sup>3</sup> Fitzpatrick C, Bangert M, Mbabazi PS, Mikhailov A, Zouré H, Polo Rebollo M, et al. Monitoring equity in universal health coverage with essential services for neglected tropical diseases: an analysis of data reported for five diseases in 123 countries over 9 years. *Lancet Glob Health*. 2018; 6:e980–988, doi:[https://doi.org/10.1016/S2214-109X\(18\)30307-3](https://doi.org/10.1016/S2214-109X(18)30307-3).

9. Important advances have been made since the adoption of the road map in 2012, as summarized in paragraphs 10–15 below.

10. **Delivery and impact of interventions.** Today, an estimated 500 million fewer people than in 2010 need interventions against neglected tropical diseases. Some 40 countries, territories and areas have eliminated at least one of 20 neglected tropical diseases. Dracunculiasis is on the verge of eradication, with 28 human cases reported in three countries in 2018. So far, WHO has certified a total of 199 countries, territories and areas, including 187 Member States, as free of dracunculiasis, 16 of which were formerly endemic for the disease, including five certified since 2012. Lymphatic filariasis and trachoma have been eliminated as a public health problem in 16 and 9 countries, respectively. Onchocerciasis has been eliminated in four countries in the Region of the Americas. The annual number of reported cases of human African trypanosomiasis has fallen from more than 7000 in 2012 to fewer than 1000 in 2018, eclipsing the original target of 2000 cases by 2020. In 2019, Mexico became the first country in the world to be validated for elimination of dog-mediated human rabies. Since 2012, the number of reported cases of visceral leishmaniasis has fallen significantly in Bangladesh, India and Nepal, where the disease is targeted for elimination as a public health problem. Elimination of leprosy as a public health problem has been achieved and sustained in all eligible countries and territories, except for Brazil.

11. **Expansion of scope and support.** The range of people who are not covered by services has been further narrowed by the progressive expansion of interventions against neglected tropical diseases in the field. In 2016, for the first time, the number of people who received treatment for one or more disease exceeded one billion. The number further increased in 2017 and peaked in 2018 when more than 1.13 billion people were delivered a cumulative total of 1.7 billion doses of medicines, including more than one million life-saving treatments delivered through specialized individual case management. Close to one million surgical treatments have been provided for trachomatous trichiasis since 2014. Between 2017 and 2019, donors committed more than US\$ 1 billion, including pharmaceutical companies, which donate an average of nearly three billion tablets or other formulations of safe, quality-assured medicines annually, worth hundreds of millions of United States dollars, to support control and elimination in countries where neglected tropical diseases are endemic. Since 2017, new donations have been secured for azithromycin to support the eradication of yaws and of niclosamide and praziquantel for treatment of taeniasis/cysticercosis due to *Taenia solium*.

12. **Development of new interventions, medicines, tools and diagnostics.** New approaches for treatment have been developed, notably an alternative regimen of three medicines (ivermectin, diethylcarbamazine citrate and albendazole) for mass treatment of lymphatic filariasis to shorten the duration of required interventions; fexinidazole for oral treatment of first-stage and non-severe second-stage gambiense human African trypanosomiasis; and a paediatric formulation of mebendazole has been developed and is available for donations to countries through WHO for treatment of soil-transmitted helminthiasis – in addition, a paediatric formulation of praziquantel for treatment of schistosomiasis is in the pipeline. New paediatric formulations of both benznidazole and nifurtimox for Chagas disease have been developed. Moxidectin, the first new treatment for onchocerciasis in 20 years, was approved by the United States Food and Drug Administration in 2018; antibiotic therapy is available to replace surgery for treatment of Buruli ulcer in some cases; and azithromycin can be used instead of injectable benzylpenicillin in most circumstances for treatment of yaws. Clinical trials of fosravuconazole, a novel medicine for treatment of mycetoma, have started. New diagnostic tools include rapid diagnostic tests and multiplex polymerase chain reaction tests for detection of the causative organisms of human African trypanosomiasis, lymphatic filariasis and onchocerciasis, and a reagent strip test for detection of circulating cathodic antigen for the diagnosis of *Schistosoma mansoni*. A rapid test to detect mycolactone for the diagnosis of Buruli ulcer is under development. Novel vector control tools include the sterile insect technique, the cytoplasmic incompatibility technique and population

replacement techniques (by *Wolbachia* spp.), as well as new vector traps and repellents, which are under trial against *Aedes* mosquitoes.

13. **New diseases, resolutions, strategies and guidance.** During the past three years, three new conditions have been added to the portfolio of neglected tropical diseases, bringing to 20 their total number. The three latest additions are (i) mycetoma, chromoblastomycosis and other deep mycoses, (ii) scabies and other ectoparasitoses and (iii) snakebite envenoming. The addition of two diseases was endorsed by Health Assembly resolutions on mycetoma (2016) and snakebite envenoming (2018). The Health Assembly adopted an additional resolution WHA70.16 in 2017 on global vector control response: an integrated approach for the control of vector-borne diseases. Global strategies have been prepared for 15 diseases. Integrated approaches are now available for neglected tropical diseases of the skin and for vector control. Normative guidance is available for 14 diseases. In 2013, the Regional Committee for Africa adopted a regional strategy and a strategic plan for neglected tropical diseases.<sup>1</sup> In 2018, the Regional Committee for the Western Pacific endorsed a regional action framework for control and elimination of neglected tropical diseases in the Western Pacific.<sup>2</sup> In 2019, the Health Assembly decided to establish World Chagas Disease Day (14 April).<sup>3</sup> Currently, World Leprosy Day and World Rabies Day are celebrated on the last Sunday of January and on 28 September, respectively.

14. **Strengthened structures and cross-sectoral collaboration.** Some 45 WHO collaborating centres support activities against neglected tropical diseases. In 2019, the Neglected Tropical Disease NGO network celebrated 10 years of achievements. The network has evolved from a disease-centred entity to one of cohesive cross-cutting groups that foster multisectoral partnerships to ensure equity and inclusion, notably for managing morbidity and preventing disability. Since 2013, the Coalition for Operational Research on Neglected Tropical Diseases continues to operationalize research on eliminating neglected tropical diseases by working in partnership. The Expanded Special Project for Elimination of Neglected Tropical Diseases, established in 2016 and hosted by the Regional Office for Africa, provides technical and financial support for control and elimination of five priority diseases<sup>4</sup> amenable to preventive chemotherapy in Africa. WHO continues to strengthen inter-agency and multisectoral collaboration and the Secretariat improves cross-organizational cooperation; successful examples include publications such as *Water, sanitation and hygiene for accelerating and sustaining progress on neglected tropical diseases: a global strategy 2015–2020*, the *global vector control response 2017–2030*, and “Zero by 30”: the global strategic plan to end human death from dog-mediated rabies by 2030.

15. **Increased country ownership and commitment.** Capacity has been strengthened to achieve greater impact in and ownership of interventions in more than 60 countries in 2019 alone. More than 50 countries now have national plans for neglected tropical diseases. Furthermore, an increasing number of countries include neglected tropical diseases in their national health care budgets and contribute domestic funds.

16. Such progress demonstrates that interventions against neglected tropical diseases are among the largest-scale public health interventions globally. However, not all the targets set in the road map are likely to be met and efforts will need to continue. At its twelfth meeting (Geneva, 29 and 30 April 2019),

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<sup>1</sup> Resolution AFR/RC63/R6 (2013).

<sup>2</sup> Resolution WPR/RC69.R4 (2018).

<sup>3</sup> Decision WHA72(20) (2019).

<sup>4</sup> Lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiases and trachoma.

the Strategic and Technical Advisory Group for neglected tropical diseases recognized that the current road map would end in 2020 and noted the challenges, summarized below, to achieving its targets.

## **CHALLENGES**

17. The Strategic and Technical Advisory Group for neglected tropical diseases noted with concern the emergence of some diseases in settlements for refugees and internally displaced people as well as in conflict zones and recommended that the situation be closely monitored. It further recommended that: cross-sectoral collaboration be continued and reinforced at all three levels of the Organization; reduced efficacy to medicines and insecticides be monitored to prevent and address any possible emergence of resistance; equity, gender and human rights be included in all activities, particularly with regard to women; and the role of women and women's groups in public health interventions be reflected in strategies to prevent, eliminate and eradicate neglected tropical diseases. It emphasized that surveillance and health systems be strengthened.

18. Climate change is likely to lengthen the transmission season of mosquito-borne diseases, such as dengue and those caused by other arboviruses. A warming climate expands the geographical reach of mosquito vectors (with, for example, the spread of dengue in Nepal) and introduces new diseases to territories that lack either population immunity or strong public health infrastructure (for instance, dengue in Afghanistan in 2019).

19. Experience gained over the past decade shows that the current approaches compromise the impact of interventions and lack coordination across the full scope of 20 diseases and beyond. For example, historically, interventions have focused on individual diseases. Such vertical or siloed approaches undermine the success of interventions. In addition, vertical programmes have proven to be overly reliant on external partners, with limited integration into national health care systems and limited interface with adjacent sectors.

20. Existing technical and operational gaps limit the scope of interventions. The main gaps concern the availability of diagnostics for all diseases and at each programmatic phase; monitoring and evaluation; access and logistics for medicines and medical products; advocacy; and resource mobilization.

## **OPPORTUNITIES**

21. In response to the challenges summarized above, shifts in focus from individual diseases to integrated, patient-centred, cross-cutting and intersectoral approaches could accelerate progress towards the achievement of universal health coverage. These approaches include:

- joint implementation of interventions to prevent, control, eliminate and eradicate several diseases simultaneously;
- mainstreaming common delivery platforms within existing health system infrastructures, particularly primary health care;
- reinforcing linkages between health and other sectors for coordinated multisectoral action addressing all relevant cross-cutting risk factors. Relevant health sectors include, but are not limited to, integrated vector management, prevention of disability and health awareness. Relevant non-health sectors include, but are not limited to, water and sanitation, food security, the One Health movement and education.

22. In monitoring and evaluating the performance of interventions, the focus could shift from process, with success measured in terms of actions taken, to impact, with success measured by improvement of epidemiological or clinical indicators.

23. The value and impact of disease-specific, small-scale vertical programmes could be enhanced by merging efforts and consolidating resources. The greater impact generated will facilitate resource mobilization from domestic funding, thus strengthening country ownership and capacity, and make programmes more attractive to partners and donors.

24. Accelerated programmatic action could advance scientific understanding for developing new tools, improving strategies and strengthening service delivery. Ongoing research and innovation can be further extended to drive progress and take mitigating action against risks such as antimicrobial resistance, climate change, complex emergencies and political instability.

25. Changes in operating models and culture will be needed to accommodate new ways of working, moving from disease-specific to integrated, patient-centred approaches driven by the needs of communities, in order to achieve greater impact.

26. Partners have been instrumental in steering the implementation of the current road map, and their support will be essential in preserving the achievements made thus far to prevent, control, eliminate and eradicate neglected tropical diseases and in fostering demonstrable improvements in global public health.

27. In light of the current challenges and needs, WHO's Strategic and Technical Advisory Group for neglected tropical diseases recommended in 2018 at its eleventh meeting that the Secretariat consider the development of a subsequent road map for 2021–2030. The Advisory Group also provided further guidance at its twelfth meeting, in 2019, on strategic direction towards the targets set in the 2030 Agenda for Sustainable Development and WHO's Thirteenth General Programme of Work, 2019–2023.

## **ACTION BY THE EXECUTIVE BOARD**

28. The Board is invited to note the report and provide guidance on the next steps to advance global action on neglected tropical diseases.

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