World Health Organization

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Eradication of malaria

Report by the Secretariat

1. Over the last 15 years the world has witnessed unprecedented progress in the fight against malaria. In addition to significant reductions achieved in malaria-related morbidity and mortality, since 2000, 17 countries have eliminated the disease (that is, recording no indigenous cases for three years or more); and six of these countries have been certified as malaria-free by WHO.[1] This progress has prompted renewed discussion regarding the ultimate goal of global malaria eradication. Against this background, there is an urgent need for WHO to clarify the Organization's position on the goal of malaria eradication.

2. WHO unequivocally supports the goal of malaria eradication. The global technical strategy for malaria 2016–2030, adopted by the Health Assembly in May 2015,[2] explicitly sets out the vision of a world free of malaria, which is equivalent to malaria eradication. This vision reaffirms the goal stated in two earlier Health Assembly resolutions, namely: resolution WHA8.30 (1955) and resolution WHA22.39 (1969). However, in order to move ahead with work on eradication, more consideration needs to be given to the determinants of eradication, such as the feasibility and expected costs of achievement, potential strategies and timelines.

HISTORICAL CONTEXT: EFFORTS MADE AND CHALLENGES FACED

3. In 1955 in Mexico, the Eighth World Health Assembly adopted resolution WHA8.30, in which it decided that WHO should, inter alia, take the initiative in the implementation of a programme whose ultimate objective was "the world-wide eradication of malaria" – the first time that eradication had been the object of a governing bodies resolution. The establishment of the Global Malaria Eradication Programme in WHO reflected the optimism of that time that: (i) malaria transmission was well understood biologically and mathematically; (ii) the insecticides and antimalarial medicines[3] available were sufficiently effective, and (iii) with proper management and a well-defined strategy eradication could be achieved in a reasonable time frame. The Organization was given the mandate to provide technical advice to Member States and coordinate resources.

[1] World malaria report 2016. Geneva: World Health Organization; 2016.

[2] See resolution WHA68.2.

[3] The Eradication Programme relied heavily on two tools: chloroquine for the prevention and treatment of malaria, and DDT for mosquito control.

4. From 1955 to 1969, the Global Malaria Eradication Programme recorded many notable successes, achieving elimination in a number of countries,[1] and marked transmission reductions in many others. However, several technical, operational and financial challenges slowed and ultimately stalled progress. These included the growing resistance of Plasmodium falciparum to antimalarial medicines, especially chloroquine, and of Anopheles mosquitoes to insecticides, especially DDT; a reliance on a rigid and inflexible implementation strategy that did not fully take account of the need to adjust to local variations in malaria epidemiology; and the erroneous assumption that all the requisite knowledge for eradication was available, which caused less emphasis to be placed on research and on the development of new tools and approaches. The lack of a fully costed and fully funded programme, and a heavy reliance on one donor, also hampered progress. Notably, in tropical Africa no real progress was recorded; worse, no serious effort to advance the situation in that region was even attempted.

5. In 1969, in resolution WHA22.39, the Health Assembly concluded that eradication did not yet seem feasible in the short term and that a strategy of control was an appropriate step towards future eradication. The Health Assembly nevertheless reaffirmed "that complete eradication of malaria from the world remains a primary task of national public health organizations and that … control of malaria with the means available should be encouraged and may be regarded as a necessary and valid step towards the ultimate goal of eradication."

6. The next two decades saw a marked increase in malaria incidence worldwide – a result of the abandonment of Global Malaria Eradication Programme and reduced investment in malaria control. Following the economic crisis of the early 1970s, funding for malaria was cut further. In parallel, further spread of drug and insecticide resistance was reported in some regions. Many areas experienced resurgences of the disease that reversed the substantial gains made.

7. At the Ministerial Conference on Malaria (Amsterdam, October 1992) which was convened by WHO, senior health leaders called for a renewed attack on malaria. Participants endorsed a new Global Malaria Control Strategy which was further endorsed the following year by the Forty-sixth World Health Assembly in resolution WHA46.32. The Strategy emphasized the vital importance of continuing malaria research and called for the application of flexible and cost-effective programmes adapted to local conditions.

8. Beginning in the late 1990s, renewed investment in research brought new tools, particularly long-lasting insecticide-treated nets, point-of-care rapid diagnostic tests, and treatment with artemisinin-based combination therapies. New resources were made available, principally through countries affected by the disease and through the Global Fund to Fight AIDS, Tuberculosis, and Malaria and other bilateral donors. All of these contributed to a massive scale-up of effective, evidence-based malaria interventions.

CURRENT SITUATION

9. The scale-up of interventions led to dramatic improvements. Between 2000 and 2015, the rate of new malaria infections decreased by 41%, while global death rates due to malaria fell by 62%,

[1] During the existence of the Eradication Programme, 15 countries and one territory eliminated malaria (Source: Eliminating malaria. Geneva: World Health Organization; 2016. Available at: http://www.who.int/malaria/publications/atoz/eliminating-malaria/en/, accessed 28 April 2017).

meaning that 6.2 million lives were saved during this period. The malaria-specific target of the Millennium Development Goals was achieved.[1]

10. Member States have continued to both achieve and maintain malaria elimination. Between 1955 and 1987, 22 countries and two territories were certified by WHO as malaria-free and a further six countries have been certified since 2007. In 2015, for the first time in history, the WHO Europe Region reported no malaria transmission. It is estimated that there are an additional 21 countries that have the potential to eliminate by 2020.

11. Despite this progress, about 3.2 billion people remain at risk of malaria. In 2015, there were 212 million new cases of malaria and more than 400 000 malaria-related deaths. In many countries, progress is threatened by the development and spread of mosquito resistance to insecticides and parasite resistance to antimalarial medicines. Continued progress in malaria control can only be accelerated through robust, predictable and long-term financing that ensures universal access to WHO-recommended core interventions.

WHO GLOBAL TECHNICAL STRATEGY FOR MALARIA 2016–2030

12. The three strategic pillars of the global technical strategy are: to ensure universal access to malaria prevention, diagnosis and treatment; to accelerate efforts towards elimination and attainment of malaria-free status; and to transform malaria surveillance into a core intervention. These strategic pillars are complemented by two key supporting elements: harnessing innovation and expanding research and development; and strengthening the enabling environment, through financing, political commitment, and multisectoral collaboration.

13. The global technical strategy restates the vision of a malaria-free world, in line with resolution WHA22.39. Notably, it establishes ambitious but achievable, evidence-based targets towards the realization of that vision. The global targets for 2030 include a reduction in malaria case incidence and mortality rates of at least 90%, the elimination of malaria in at least 35 countries (compared with a 2015 baseline) and the prevention of re-establishment of the disease in countries that are malaria-free. Interim milestones for 2020 and 2025 were also identified. Since May 2015, the global technical strategy has been translated into regional malaria strategies that have been endorsed by corresponding regional committees. The global technical strategy is complemented by the Roll Back Malaria Partnership's document, Action and Investment to defeat Malaria 2016–2030 (AIM) – for a malaria-free world, which advocates for multisectoral, cross-border and people-centred approaches in the new era of the Sustainable Development Goals.

14. Sustainable Development Goal 3, target 3.3 calls on the world, inter alia, to end the epidemic of malaria by 2030. The Secretariat proposes that WHO should interpret this as meaning achievement of the 2030 targets of the global technical strategy for malaria 2016–2030. The global technical strategy shares the same timeline as the Sustainable Development Goals.

15. Universal health coverage will play a central role in the achievement of Sustainable Development Goal 3, target 3.3. The global technical strategy for malaria 2016–2030 fully embraces the concept of universal health coverage; equity in access to health services is a guiding principle of the global technical strategy.

[1] Millennium Development Goal 6, target 6C called for halting and beginning to reverse the global incidence of malaria between 2000 and 2015.

DEFINITION OF KEY TERMS AND CONDITIONS

16. The reductions in the malaria case incidence and mortality rates over the last decade, along with the heightened interest in and commitment to national and regional elimination goals have inevitably sparked renewed debate and discussion on the subject of eradication. Responding adequately to this interest calls for a clear and common understanding regarding terminology, as well as a coordinated, transparent, and evidence-based discussion on technical and operational feasibility and respective timelines.

17. Definitions of malaria eradication and elimination have evolved over time. Currently, WHO defines malaria eradication as: "a permanent reduction to zero of the worldwide incidence of infection caused by human malaria parasites as a result of deliberate activities."

18. Malaria elimination is defined by WHO as: "the interruption of local transmission (reduction to zero incidence of indigenous cases) of a specified malaria parasite in a defined geographical area as a result of deliberate activities."[1] Elimination can occur at subnational, national or regional levels. In the elimination context, continued measures are required to prevent re-establishment of transmission, whereas once eradication has been achieved, there is no further need of such interventions.

STRATEGIC ADVISORY GROUP ON MALARIA ERADICATION

19. In order to consider the determinants of eradication, such as the feasibility and expected costs of achievement, potential strategies and timelines, WHO has convened a Strategic Advisory Group on Malaria Eradication. The Strategic Advisory Group is composed of eminent leaders and scientists, representing a broad range of disciplines and geographical settings.

20. The Strategic Advisory Group on Malaria Eradication will coordinate and direct a two-year analysis of future scenarios for malaria, taking into consideration a broad set of biological, technical, financial, socioeconomic, political and environmental determinants, including climate change. Other areas considered will include: potential products of innovation; trends in population growth and mobility, including urbanization; and agricultural land use. Based on these analyses, the Strategic Advisory Group will provide advice to WHO on the technical and operational feasibility and expected cost of malaria eradication over the ensuing decades and potential strategies for achieving it. The Director-General will report back to the Board once the Strategic Advisory Group on Malaria Eradication has completed its work.

ACTION BY THE EXECUTIVE BOARD

21. The Board is invited to note the report.

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[1] WHO malaria terminology. Geneva: World Health Organization; 2017 (available at http://www.who.int/malaria/publications/atoz/malaria-terminology/en/, accessed 3 May 2017).