Global **Malaria** Programme

WHO Strategic Advisory Group
on Malaria Eradication

Malaria eradication: benefits, future scenarios and feasibility

Executive summary

World Health Organization

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* These four members of the SAGme had to depart before the work of the Group concluded and have therefore not reviewed this manuscript.

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The past leads us forward . . .

“Malaria control should not be a campaign, it should be a policy, a long-term program. It cannot be accomplished or maintained by spasmodic effort. It requires the adoption of a practicable program, the reasonable continuity of which will be sustained for a long term of years.”

Mark F. Boyd (1939)

SUMMARY AND INTRODUCTION

A world free of malaria is a major goal of global health, unequivocally embraced by the World Health Organization (WHO) soon after its founding in 1948. This aspiration has energized and inspired generations of health workers, malaria experts and global health leaders alike. The WHO's Global Malaria Eradication Programme (GMEP; 1955–1969) was an ambitious attempt to achieve a malaria-free world. While the GMEP led to the elimination of malaria in many countries, it failed to achieve global eradication and the plan was not implemented in sub-Saharan Africa where the greatest burden of malaria was found (Nájera et al., 2011). Falling short of eradication led to a sense of defeat, the neglect of malaria control efforts and abandonment of research into new tools and approaches. Malaria came back with a vengeance; millions of deaths followed. It took decades for the world to be ready to fight back against malaria.

Almost 50 years later, the world once again began to consider the feasibility of eradicating malaria. Significant declines in the global malaria mortality rate and case incidence between 2000 and 2015 and an increasing number of countries certified malaria-free generated renewed enthusiasm for tackling one of the main causes of death and disease in the world. In 2015, the Sixty-eighth World Health Assembly unanimously endorsed a bold plan - the *Global technical strategy for malaria 2016–2030* - to rid the world of 90% of the burden of death and disease due to malaria by 2030 and to eliminate this infection from at least 35 more countries (WHO, 2015). These ambitious yet achievable targets are considered essential stepping stones on the path to achieving a world free of malaria, the vision that was reaffirmed in the plan.

In 2016, at the request of the WHO Director-General, a group of scientists and public health experts from around the world were brought together to advise WHO on future scenarios for malaria, including whether eradication was feasible. Over three years, we, the members of the Strategic Advisory Group on Malaria Eradication (SAGme), analysed trends and reviewed future projections for the factors and determinants that underpin malaria.

KEY TERMS

Control: Reduction of disease incidence, prevalence, morbidity or mortality to a locally acceptable level as a result of deliberate efforts. Continued interventions are required to sustain control.

Elimination: 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. Continued measures to prevent re-establishment of transmission are required.

Eradication: Permanent reduction to zero of the worldwide incidence of infection caused by human malaria parasites as a result of deliberate activities. Interventions are no longer required once eradication has been achieved.

Source: *WHO malaria terminology (WHO 2016)*

Our analysis and discussions reaffirmed that eradication will result in millions of lives saved and a return on investment of billions of dollars. We did not identify biological or environmental barriers to malaria eradication. In addition, our review of models accounting for a variety of global trends in the human and biophysical environment over the next three decades suggest that the world of the future will have much less malaria to contend with. However, even with our most optimistic scenarios and projections, we face an unavoidable fact: using current tools, we will still have 11 million cases of malaria in Africa in 2050 (Gething P, University of Oxford, unpublished data, 2018). In these circumstances, it is impossible to either set a target date for malaria eradication, formulate a reliable operational plan for malaria eradication or to give it a price tag.

Our priority now should be to establish the foundation for a successful future eradication effort while guarding against the risk of failure that would lead to the waste of huge sums of money, frustrate all those involved, national governments and malaria experts alike, and cause a lack of confidence in the global health community's ability to ever rid the world of this disease.

We need a renewed drive towards research and development on vector control, chemotherapy, and vaccines to develop the transformative tools and knowledge base that will help achieve eradication in the highest burden areas. We need political leadership that makes effective and efficient use of increased domestic and international funding. We need bespoke national and subnational strategies guided by improved use of data and stronger delivery systems to provide the appropriate mix of services to all those in need, without financial hardship. We need strengthened cross-border, regional, and international cooperation to coordinate malaria control and elimination efforts worldwide. When these critical foundations are laid, we believe the world will be in a much stronger position to make the final and credible push for eradication.

As we complete our work in 2019, we recognize that the world stands at a crossroads in the fight against malaria. Despite huge progress in reducing malaria cases and deaths between 2000 and 2015, the last two years have witnessed the stalling of global progress. The world is not on track to meet the 2020 milestones that will lead us to lower case incidence and mortality by 90% from the 2015 level by 2030 (WHO, 2018a). Without massive concerted and coordinated action, we are unlikely to meet these targets.

In this document, we have articulated the investments and progress that are needed to achieve eradication. The methods and results of our analyses will be published before the end of 2019, but we are releasing the report's executive summary in advance to share the key conclusions and recommendations developed over this three-year effort