Researchers' perceptions of malaria eradication: findings from a mixed-methods analysis of a large online survey

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Abbreviated running title:

Survey on malaria eradication

Key messages:

- We estimate probability of and time frame of eradication given researchers' perceptions.
- Our results suggest that most malaria researchers believe short-term global malaria eradication to be unlikely.
- We identify challenges pertaining to eradication through qualitative analysis.
- We highlight implications for health spending and policy, given the perceived low probability of eradication.

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Abstract

The expected value of an investment hinges on the probability of, and time until, its realization. Though the long-term benefits of global malaria eradication promise to be large, the upfront costs and uncertainty regarding feasibility and timeframe make it difficult for policymakers and researchers to forecast the return on investment. Since a notion of the future of global malaria eradication is required in order to make fully informed health spending decisions in the present, we set out to quantify the probability and time frame of eradication through a large online survey of 844 peer-reviewed malaria researchers of different scientific backgrounds. Adjusting for selection bias, we found that the average perceived likelihood of global eradication among malaria researchers approximates the number of years into the future: approximately 10% of researchers believe that eradication will occur in the next 10 years, 30% believe it will occur in the next 30 years, and half believe eradication will require 50 years or more. The 61% of researchers who gave free form comments highlighted systemic challenges and the need for innovation as chief among obstacles to achieving global malaria eradication. Our findings highlight the difficulty and complexity of malaria eradication, and can be used in prospective cost-benefit analyses to inform stakeholders regarding the likely return on eradication-specific investments. Though researchers are generally sceptical regarding the possibility of eradication in the short-term, even failed eradication campaigns may offer substantial return on investment given the associated reductions in morbidity and mortality.