

First study to estimate the global costs due to vivax malaria

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The global cost of vivax malaria infections could be reduced substantially if radical cure is used more effectively, a new paper has found.

Menzies School of Health Research (Menzies) senior research officer Dr Angela Devine is the lead author of the first global study of the economic cost of vivax malaria. The study found that the cost of vivax malaria was US\$359 million (AU\$441 million) in 2017.

Globally, there were more than 14 million cases of vivax malaria in 2017. The study explored the impact of adopting new policies, estimating that 6.1 million cases of vivax malaria could be prevented, reducing the global cost of vivax malaria by nearly US\$100 million (AU\$123 million).

These new policies include widespread access to screening for glucose-6-phosphate dehydrogenase (G6PD) deficiency and perfect adherence to the radical cure – a treatment of antimalarial drugs that kill both the blood and liver stages of the parasites that cause malaria.

“Our study found that supervised primaquine could lead to a substantial reduction in the global costs of vivax malaria, although the costs to healthcare providers will be higher while patient costs decrease,” Dr Devine said.

“Rapid point-of-care testing for G6PD deficiency is also needed to ensure that patients can safely take the radical cure. This has been a barrier to the uptake of some of antimalarial drugs as people with G6PD deficiency may experience side-effects that require hospitalisation.

“Provision of safe and effective radical cure is possible but will require an increased investment in both testing and treatment. Our findings suggest that such an investment could ensure that people with vivax malaria do not relapse, therefore providing substantial cost savings at the societal level and reductions in malaria case numbers.

“Many people who get malaria or need to provide care for a household member who has malaria are forced to miss work or school. In households that rely on subsistence farming, this can be catastrophic.”

Professor Ric Price, co-lead of the Menzies malaria team and an author of the paper, says that the paper is an important tool for better understanding the effects of vivax malaria and its impact on communities.

“Vivax malaria remains an important public health burden affecting the poorest and most vulnerable communities living in 49 countries. Novel, low-cost interventions for improving adherence to the radical cure and widespread access to screening for G6PD deficiency will be critical to achieving the timely global elimination of *P. vivax*,” Prof Price said.

The paper is a collaboration between researchers at Menzies, University of Melbourne, the Institute for Disease Modeling, the Foundation for Innovative New Diagnostics (FIND),

University of Oxford, Telethon Kids Institute, Curtin University and Mahidol Oxford Tropical Medicine Research Unit.

Read the full paper [in *PLOS Medicine* here](#).

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Menzies School of Health Research

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