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MEDIA RELEASE

Menzies contributes to key antimalarial recommendations from multinational network

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A new study by a global collaborative platform for scientists and clinical researchers hopes to address antimalarial drug resistance which continues to hamper malaria control programs.

Malaria causes over 200 million clinical infections a year, and is a major cause of morbidity and mortality in the Asia-Pacific region.

The study, published this week in *PLOS Medicine,* explores the issue of antimalarial drug resistance by presenting the results of a large pooled analysis of more than 8,000 patients from Asia, Africa and South America.

It presents a convincing argument for public health policy makers to pay careful attention to dosing recommendations for artemisinin combination therapies (ACTs) when reviewing current drug treatment protocols, particularly for young children.

The results of the study, coordinated by the WorldWide Antimalarial Resistance Network (WWARN), show that while treatment of malaria with a combination of dihydroartemisinin-piperaquine generally results in excellent patient recovery, young children are at higher risk of treatment failure and this may be due to their receiving an insufficient dose of the drug.

A lead WWARN investigator and Menzies senior principal research fellow, Professor Ric Price said the study highlighted the ability of researchers from around the world to come together and pool their data for collective gain.

“The power of such research collaborations will help to support the optimisation of current antimalarial treatments, reduce the spread of antimalarial drug resistance, and ultimately save lives,” Prof Price said.

WWARN brought together 76 researchers worldwide who contributed individual patient data from 26 clinical studies. These data are being used to analyse the implications of different drug dosing strategies of ACTs, for improve treatment efficacy. The results, which combine almost 70 per cent of all available published data on this treatment, confirm that dihydroartemisinin-piperaquine is highly efficacious curing more than 97 per cent of patients.

However, the study also highlights that one third of children aged 1–5 years received a dose of piperaquine below that recommended by the World Health Organization. Furthermore, patients receiving a lower dose were slower to respond to treatment and had a greater risk of getting malaria again.

Study co-author and director of the Rwandan National Malaria Control Program, Dr Corine Karema emphasised that: *“*For us to eliminate malaria, it is very important that malaria treatment guidelines are optimal to maximise their impact and ensure all patients are rapidly and completely cured.”

The open access PLOS paper, *The Effect of Dosing Regimens on the Antimalarial Efficacy of Dihydroartemisinin-Piperaquine: A Pooled Analysis of Individual Patient Data*, can be viewed at: http://www.plosmedicine.org/article/info%3Adoi%2F10.1371%2Fjournal.pmed.1001564

Media note:
Ric Price is Menzies' Professor of global health; senior principal research fellow; staff specialist in infectious diseases and general medicine, Division of Medicine, Royal Darwin Hospital.

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Menzies Background
Menzies School of Health Research is Australia's only Medical Research Institute dedicated to improving Indigenous health and wellbeing. We have a 28-year history of scientific discovery and public health achievement. Menzies works at the frontline, partnering with over 60 Indigenous communities across Northern and Central Australia. We collaborate to create resources, grow local skills and find enduring solutions to problems that matter.