

Comparing seasonal chemoprevention with long-acting artemisinin combination therapy to prevent malaria and anaemia in children in Ghana

PROJECT BRIEF

This study looks at the use of Intermittent Preventative Treatment in children (IPTc) in an area with long malaria transmission season and also evaluates the use of a longer acting antimalarial for treatment as a means of chemoprevention.

Background

Two strategies have been recommended for the control of malaria in children under 5:

1. Seasonal Malaria Chemoprevention (SMC) where monthly courses of antimalarials are given to children over a period of 3 months in areas of seasonal malaria transmission; and
2. Home Management of Malaria (HMM) where community health workers treat children with antimalarials when they report with fever.

SMC and HMM have each been proven to be effective in reducing malaria and anaemia episodes in children under 5, and a combination of both SMC and HMM is superior to implementing either just by themselves.

It is not known, however, whether HMM using a longer acting antimalaria drug will produce the same reduction in malaria and anaemia as SMC delivered over 5 months during the transmission season.

Study aims

The study aims to compare the effect of:

- SMC over 5 months with HMM using a longer acting antimalaria drug on the incidence of malaria and anaemia in children under 5 years; and
- HMM using a longer acting antimalaria drug with HMM using a shorter acting antimalaria drug on the incidence of malaria and anaemia in children under 5 years.



A child taking his dose of SMC

Researchers:

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In-country partners:

- Municipal Health Directorate, Ejisu-Juaben
- National Malaria Control Programme

Project setting:

Ejisu-Juaben District, Ashanti Region

Research themes addressed:

- Community interventions
- Accessible and user-friendly services
- Quality of care



A care giver giving a dose of SMC to a child

The study

The study will involve 2400 children who will be split into 3 groups, with 800 in each group:

- Group 1: When a child in this group reports to a community health worker with fever, the health worker will use a rapid diagnostic test to diagnose malaria. If the child is positive, they will receive artemether-lumefantrine (a short acting antimalaria drug)
- Group 2: When a child in this group reports to a community health worker with fever, the health worker will use a rapid diagnostic test to diagnose malaria. If the child is positive, they will receive dihydro-artemisinin piperaquine (a longer acting antimalaria drug)
- Group 3: Children in this group will receive a monthly dose of sulphadoxine-pyrimethamine plus amodiaquine over 5 months (SMC) during the transmission season. If a child in this group reports with fever to a community health worker during the study, the health worker will use a rapid diagnostic test to diagnose malaria. If the child is positive, they will be treated with artemether-lumefantrine, but not dihydro-artemisinin piperaquine.

Potential scaling up of research findings

Our recommendations will provide proof of concept and assess effectiveness for future scale up.

In particular, we will recommend the use of dihydroartemisinin piperaquine for treating malaria in the HMM programme in this setting if the study shows that:

- HMM with malaria diagnosis before treatment using dihydro-artemisinin piperaquine is similar to SMC given over 5 months; and
- HMM with malaria diagnosis before treatment using dihydroartemisinin piperaquine is superior to HMM using artemether-lumefantrine.

For more information about this project, email Harry Tagbor at Harry.Tagbor@lshtm.ac.uk

About COMDIS-HSD

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