MALARIA CONSORTIUM
**PROJECT BRIEF**

# Conducting rapid assessments to build the evidence base for seasonal malaria chemoprevention in new geographies

## Expanding SMC to new areas of East and southern Africa

## Background

To prevent malaria among children under five — who are most vulnerable to the disease — the World Health Organization (WHO) recommends seasonal malaria chemoprevention (SMC) in areas where malaria transmission is seasonal. This community-based intervention involves administering monthly courses of the antimalarial medicines sulfadoxine-pyrimethamine plus amodiaquine (SPAQ) to children 3–59 months during the peak malaria transmission season.

SMC has been used successfully in the Sahel region of West and Central Africa and has been shown to be 75 percent effective in preventing uncomplicated and severe malaria during this high-risk period. In 2022, the WHO issued its updated Guidelines for Malaria, giving malaria-endemic countries more flexibility to develop malaria prevention and control strategies in line with their local contexts.[1] This opens the possibility of expanding SMC to areas of East and southern Africa (ESA) where malaria transmission is seasonal. However, compared to the Sahel, there is much greater heterogeneity across ESA in terms of parasite resistance profiles, malaria transmission and prevalence, population immunity and variability in the expression of genes. These factors are likely to affect how efficacious the SMC medicines are,

### Country
Up to five countries across East and southern Africa

### Donor
This project is funded through philanthropic donations received as a result of Malaria Consortium's SMC programme being awarded Top Charity status by GiveWell, a non-profit organisation dedicated to finding outstanding giving opportunities.

### Length of project
August 2022 – July 2024

### Partners
Imperial College London

Local research partners

Ministries of health in each country

and how efficacious they can remain in the future. In addition, sociocultural factors are likely to affect the feasibility and acceptability of the intervention.

## Project outline and objectives

We believe that delivering SMC safely, effectively and sustainably in ESA requires a locally adapted approach, potentially different from the one used for scale-up in the Sahel. Together with the national malaria programmes of Mozambique, South Sudan and Uganda, Malaria Consortium conducted implementation research between 2020 and 2022 to determine if SMC can be a suitable malaria prevention strategy in this new geography.

In 2023, we expect to carry out a rapid assessment in an area of Mozambique where SMC is not yet being implemented. We are also planning for rapid assessments in the Democratic Republic of Congo and Malawi, where SMC has never been tested as an intervention. The rapid assessments will involve 'light' versions of research methods used in our recent SMC implementation studies in Mozambique, Uganda and South Sudan, designed to provide evidence on the potential impact of SMC in these new geographies quickly. This will enable ministries of health to make decisions on the inclusion and scale-up of SMC in national malaria control strategies.

Over the course of the project, we expect to carry out rapid assessments in up to five countries across ESA, where SMC has not previously been delivered at scale.

The main objectives of the rapid assessments are to:

- determine the effectiveness of SMC in terms of its impact on malaria incidence among children 3–59 months
- determine the chemoprevention efficacy of SPAQ when used for SMC, and the extent to which efficacy is impacted by drug resistance and drug concentrations
- map the baseline SPAQ resistance markers profile
- develop a dynamical model to estimate the impact of SMC and identify locations to expand the intervention.

## Activities

Our research methods will be uniquely tailored to the local context for each rapid assessment location, while considering the availability of reliable data. Each rapid assessment will include an intervention and a control area. In each intervention area, we will carry out one cycle of SMC, distributing SPAQ to children under five during the high transmission season. SMC will not be implemented in the control area. For the rapid assessments, we will:

- establish confirmed malaria cases in children through a cluster randomised controlled trial
- use a prospective cohort study to determine the chemoprevention efficacy of SPAQ and whether drug concentrations and/or resistance influence the duration of protection
- carry out a resistance markers study in children 3–59 months
- use a dynamic model to establish the protective effect of SPAQ to determine where SMC could be a suitable malaria prevention strategy in other areas of the relevant country, working with Imperial College London
- conduct a process evaluation to understand the feasibility and acceptability of the SMC intervention in the new locations.

## Reference

1. World Health Organization. WHO guidelines for malaria. Geneva: WHO; 2022. Available from: https://apps.who.int/iris/handle/10665/352687.



**Contact:** info@malariaconsortium.org

**Cover image**: Community distributors delivering SMC medicines to eligible children, Malema, Mozambique. Credit: Nuno Mario/Malaria Consortium

FightingMalaria
MalariaConsortium
www.malariaconsortium.org

3 GOOD HEALTH AND WELL-BEING

malaria consortium
disease control, better health