MULTIPLY

Preventing malaria in early childhood

Pilot introduction to reduce malaria illness among
**African children under 2 years of age**

# Malaria during early childhood: Perennial Malaria Chemoprevention

*A cost-effective intervention for reducing illness and hospitalisations*

June, 2022

**African children under the age of two are the most at risk for malaria illness and death.** Cases are rising in many areas,[i] with 80% of malaria deaths among children under 5 years of age.[ii]

**In 2022, the World Health Organization (WHO) updated its 2010 recommendation** regarding the use of sulfadoxine-pyrimethamine (SP) to prevent malaria. WHO had previously recommended Intermittent Preventive Treatment in infants (IPTi), called that because it was malaria control for infants **under 12 months of age.** This was for infants living in areas with moderate-to-high malaria transmission where resistance to sulfadoxine-pyrimethamine (SP) is low.[iii]

In 2022, WHO expanded that recommendation to cover children **through the age of two** because of studies documenting the value in children aged 12 to 24 months. The name for this preventive treatment has consequently changed to **Perennial Malaria Chemoprevention (PMC)** as the updated recommendation is no longer just for infants.

PMC provides a full therapeutic course of SP (whether or not parasites are present) through the Expanded Programme on Immunization (EPI) at defined intervals corresponding to routine vaccination contacts in the first two years of life. PMC reduces malaria illness by 30%, hospital admissions by 23% and anaemia by 21%.[iv v] PMC is also cost-effective.[vi] SP is inexpensive, and the delivery system is already set up through the EPI.

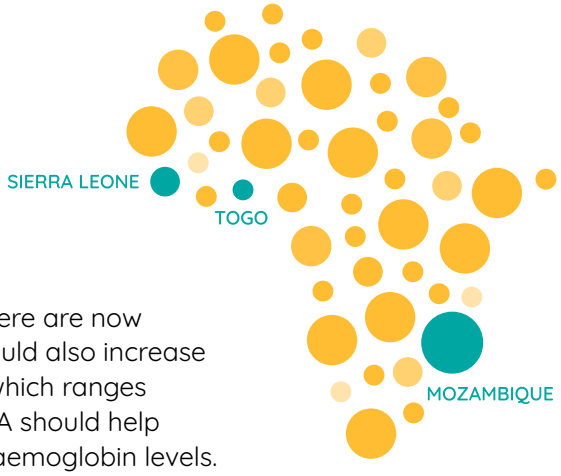
**Only one African country – Sierra Leone – has put PMC into policy and practice. Concerned with this slow adoption, WHO in 2019 recommended adaptations be urgently tested** through pilots assessing impact, operational feasibility and cost effectiveness.[vii]

**MULTIPLY supports the WHO guideline update by adding extra doses into the vitamin A and measles booster delivery that have been added to the EPI. This has numerous benefits.** SP can be provided in the second year of life during the booster dose of measles immunisation between 15-18 months of age.

**MULTIPLY aims to increase protection against malaria in the first 2 years of life by giving up to 6 doses of SP during routine immunisations and vitamin A supplementation**

MULTIPLY stands for MULTIple doses of IPTi Proposal: a Lifesaving high Yield intervention. Working with ministries of health in Mozambique, Sierra Leone and Togo, the project is evaluating the impact of adding extra doses of PMC in the first two years of life in selected districts in each country. The pilot introduction is led by the Barcelona Institute for Global Health (ISGlobal) in Spain, in coordination with researchers at:

- Fundaçao Manhiça, at Centro de Investigação em Saúde de Manhiça (CISM), Mozambique
- University of Lomé (UL), Togo
- College of Medicine and Allied Health Sciences (COMAHS), University of Sierra Leone, Sierra Leone
- Institut de Recherche pour le Développement (IRD), France
- Medicines for Malaria Venture (MMV), Switzerland




Since the EPI gives vitamin A every 6 months up to 2 years of age, there are now more opportunities to give SP for malaria prevention. Adding PMC could also increase coverage of vitamin A supplementation at the immunisation clinics, which ranges between 53%-57% in sub-Saharan Africa. Combining SP and vitamin A should help reduce the prevalence of anaemia in young children by increasing haemoglobin levels.


At regularly scheduled visits for routine vaccines and vitamin A, approximately 45,000 children will receive a paediatric dispersible dose of SP in a small amount of liquid. They will receive this up to six times within the first two years of life.

Researchers are analysing:

- how feasible and acceptable it is to integrate PMC into the immunisation system
- cost effectiveness
- impact on malaria cases, anaemia and overall mortality
- potential development of resistance to SP

## Key messages

- PMC is a cost-effective measure recommended by WHO to reduce malaria illness and hospitalisations in sub-Saharan Africa.
- Adding more doses and extending into the second year of life should increase protection and reduce the risk of getting sick between doses.
- Providing the doses within the EPI is feasible and sustainable as it builds on an existing and functioning delivery system, increasing the value of this system and expanding access to needed immunisations and vit. A supplementation.
- MULTIPLY supports community involvement and empowerment, which should increase through the development of a social and behaviour change communication campaign.
- The investment is modest in relation to the dramatic return it guarantees preventing childhood illnesses and future disability.
- It is imperative for more countries in Africa with areas of moderate-to-high malaria transmission to implement PMC through the EPI.

## Who supports this

The 40-month project, to end in August, 2024, is part of the European & Developing Countries Clinical Trials Partnership (EDCTP) 2 programme, supported by the European Union. It is being implemented by the ministries of health in Mozambique, Sierra Leone and Togo.

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