The vast majority of malaria deaths occur in young children. In some parts of Africa, mortality rates are particularly high during and immediately after the rainy season. Around 39 million African children under the age of 5 years live in areas of seasonal malaria, where an estimated 152,000 lose their lives to the disease each year.²

Most of these children live in the Sahel and sub-Sahel regions of Africa where, to protect young children, the World Health Organization (WHO) recommends the administration of monthly courses of the antimalarial drug combination sulfadoxine-pyrimethamine and amodiaquine (SP+AQ) as Seasonal Malaria Chemoprevention (SMC).¹ The intervention has the potential to avert several million new cases of malaria and save tens of thousands of lives.²

A coordination group comprising malaria-endemic country institutions, malaria control programme managers and international partners is being established by the West Africa Roll Back Malaria Network (WARN), to coordinate SMC-related activities and support countries to plan, implement and monitor SMC.

SMC fact-file¹
- WHO recommends SMC with SP+AQ in areas with highly seasonal malaria transmission in the Sahel region of sub-Saharan Africa, where Plasmodium falciparum remains sensitive to both antimalarial medicines, SP and AQ.
- A complete treatment course of SP+AQ should be given to children aged between 3 and 59 months at monthly intervals, during the malaria transmission season, beginning at the start of the season, to a maximum of four doses.
- SMC is complementary to existing malaria control interventions. It can be implemented alongside community case management of malaria.

SMC in action
In Senegal, SMC using trained community health workers was implemented in four districts through the health system.
- More than 890,000 courses of SP+AQ were administered to more than 180,000 children.³ High coverage was achieved and the intervention was well accepted by the community.
- Cost per monthly course per child was USD$ 0.50.

SMC has been administered to more than 175,000 children between 3 months and 5 years of age in southern Mali and in two areas of Chad.⁴ Preliminary results from the programme show that the number of cases of simple malaria dropped by 65% in the intervention area in Mali, and by up to 86% in Chad.⁴ A significant decrease in cases of severe malaria has also been recorded.
Q What place do preventive treatments have versus diagnosis and treatment in the control of malaria in vulnerable groups?

There is always a balance between the two approaches and the decision which to use has to be determined by the incidence of malaria. Where the risk of clinical attacks is high, it makes sense to give drugs for prevention to everyone. But as the incidence goes down, that approach is no longer cost effective, as only a small proportion of people will benefit from the drugs, and all drugs pose some risk.

Q What is the role of preventive treatments versus a potential vaccine?

Should a vaccine come along that is more than 80% effective then it would be deployed instead of preventive treatments. However, I think it could be at least 10 years before this happens. There is a risk to developing a new preventive treatment ready for use in 3–4 years’ time, as it might only have a lifespan of 5 years, but given the many lives that could be saved even in that time frame, it is a risk worth taking.

Q How can the use of effective preventive therapies like SP+AQ be expanded?

As with all interventions, there are a number of bridges to be crossed between a WHO recommendation and implementation. The push to deploy SMC needs to come from endemic countries – but they will need some help.

Malaria control is becoming a lot more complicated and implementing a new tool is hard work, putting a strain on National Malaria Control Programmes, some of which have very limited resources. WHO has been in discussions with ministries of health in endemic countries, such as Senegal, to see how it can help, for example by developing implementation guidelines. Médecins Sans Frontières has done some work in Mali and Chad. Now that SMC is recommended by WHO, countries can include it in their funding requests to international donors such as the Global Fund.

Implementing a new intervention successfully needs local champions. African scientists have been involved from the outset in the trials of SP+AQ and so the ownership is there.

MMV has been very helpful in initiating dialogue on how to make the drugs used for SMC as cheap as possible and easy to administer, as well as looking at developing other long-acting drugs.

References

Prof. Brian Greenwood, Department of Clinical Tropical Medicine at the London School of Hygiene & Tropical Medicine, UK, has worked for decades in Africa, researching and treating malaria. He explains the role of preventive therapy and approaches to its scale-up and widespread use.