

Technical note

Malaria vaccine and malaria elimination priorities in the Americas

December 3, 2021

The World Health Organization (WHO) is recommending **the use of the RTS,S/AS01 (RTS,S) malaria vaccine among children in sub-Saharan Africa and in other regions with moderate to high (>250 cases per 1 000 population), *P. falciparum* malaria transmission.**

This recommendation came after a joint meeting of the WHO advisory committees for malaria (MPAG) and immunizations (SAGE) on October 8, 2021 and based on the results of ongoing pilot programs in three African countries. The pilot evaluations in Ghana, Kenya and Malawi showed that vaccine introduction was associated with a significant reduction (30%) in severe malaria, even when introduced in areas where insecticide-treated nets are widely used and there is good access to diagnosis and treatment. The malaria vaccine, RTS,S, acts against *P. falciparum*, the most deadly malaria parasite globally, and the most prevalent in Africa.

Between the year 2015 and 2020, in the region of the Americas, a total of approximately 130,000 (21%) cases of malaria due to *P. falciparum* and 480,000 (79%) cases of malaria due to *P. vivax* had been reported annually. The latter causes the greatest burden of malaria in the Region.

Although the elimination of *P. falciparum* malaria continues to be a challenge in affected countries, the transmission levels of *P. falciparum* malaria in the Americas are much lower than in areas of moderate to high transmission, where the vaccine is being recommended.

Over the past 5 years, the annual parasite incidence (API) of *P. falciparum* malaria in endemic countries in the Americas with this form of malaria, has ranged, at the country level, from a minimum value of 0 to a maximum value to 8.5 cases per 1000 inhabitants, which is classified as a "very low" level of transmission.

The differences in malaria transmission' levels between countries in Africa and in the Americas are explained mainly by differences in the species of vectors (mosquitoes) that transmit the disease, as well as by other biological, ecological, and living conditions of the affected populations.

Malaria has a significant negative impact on endemic areas within some of the countries of the Americas, and the disease continues to inflict suffering in many communities.

However, mortality from malaria in the Americas (which has caused an average of 279 deaths per year over the past 5 years) is significantly lower than in the areas where the WHO recommends the application of this new vaccine; the recommendation is based on the pilot evaluation that demonstrated effectiveness in reducing severe forms of malaria.

Towards malaria elimination in the Americas

The 18 countries and territories that remain malaria-endemic in the Americas have reaffirmed their commitment to eliminating transmission of the disease, and in the last four years, three countries (Argentina, El Salvador, and Paraguay) have been certified malaria-free by the WHO.

To achieve the goal of malaria elimination in the region, PAHO / WHO and many other institutions and partners in the Region continue to support countries to implement the recommended interventions of early diagnosis, timely treatment and follow up of cases, and vector control (insecticide-treated mosquito nets and indoor residual spraying). Additionally, countries are being encouraged to introduce changes and make improvements on interventions among communities directly affected by malaria based on better analysis and understanding of the local context.

Challenges to elimination

Countries of the Americas, continue to experience significant challenges in properly implementing the recommended tools for malaria elimination. Many communities affected by malaria in the Region remain unprotected by preventive measures such as insecticide-treated mosquito nets, while early access to malaria diagnosis and treatment continues to suffer from important gaps, despite the existence of highly effective drugs and diagnostic methods that are easy to use and apply in hard-to-reach areas. If these measures were properly implemented in the countries throughout the existing health networks with greater community engagement and involvement of other public and private actors, they could make a great difference in the fight against malaria.

Call to action

WHO's recommendation for the RTS,S vaccine in areas where *P. falciparum* infection affects a large proportion of the population highlights the need for new tools against malaria in specific contexts.

This recommendation gives PAHO an opportunity to call on countries and stakeholders involved in the fight against malaria in the Americas to adequately implement the recommended tools and to adapt solutions to the malaria situation in affected communities. The Americas has the conditions to advance and conclude many years of successful fight against Malaria.

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