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CAN MALARIA VACCINE ROLLOUT BE SCALED UP?

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Twenty countries aim to roll out a malaria vaccine pilot programme in 2024, according to GAVI, the Vaccine Alliance, and other outfits which aim to provide equal access to new and underused vaccines for children living in the world's poorest countries. Photo: WHO

The story so far: On January 22, Cameroon in Africa became the first country in the world to launch the RTS, S malaria vaccine for children into its routine national immunisation services. According to the World Health Organization (WHO), the rollout follows a malaria vaccine pilot programme in Ghana, Kenya and Malawi, as efforts gather pace to scale up vaccination against the disease in high risk areas. Twenty countries aim to roll out the programme this year, according to GAVI, the Vaccine Alliance, and other outfits which aim to provide equal access to new and underused vaccines for children living in the world's poorest countries.

Malaria is one of the biggest killers of children under five across the world and according to WHO data, more than 30 countries have areas with moderate to high malaria transmission. Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bite of the infected female Anopheles mosquito. It is preventable and curable.

In 2022, nearly half of the world's population was at risk of malaria. According to the WHO's World Malaria Report 2023, while Africa bears the highest malaria burden, accounting for 94% of cases and 95% of global malaria deaths in 2022, India in 2022, accounted for a staggering 66% of malaria cases in the WHO South-East Asia Region. India and Indonesia accounted for about 94% of all malaria deaths in the WHO South-East Asia Region. Despite a 55% reduction in cases since 2015, India remains a significant contributor to the global malaria burden. The Health Ministry said that over the past 15 years, India has made progress in reducing its malaria burden. It has a vision for a malaria-free country by 2027 and elimination by 2030.

The current rollout is part of a UNICEF initiative where the contract for the first-ever supply of a malaria vaccine was given to British multinational pharmaceutical and biotechnology company GSK with a value of up to $170 million, according to an official release by the organisation. This, it said, would lead to 18 million doses of the vaccine — RTS,S/AS01 — being available over the next three years. UNICEF adds that the RTS,S malaria vaccine is the result of 35 years of research and development and is the first-ever vaccine against a parasitic disease. The vaccine acts against Plasmodium falciparum, the most deadly malaria parasite globally. Meanwhile, the anticipated rollout of a second jab — R21 — developed by Oxford University, is expected to significantly increase the number of doses available for use. This is to be manufactured by the Serum Institute of India, which aims to make 100 million doses per year, so long as it passes the

regulatory approvals following its recommendation for use by the WHO last year.

The vaccine, as per WHO, should be provided in a schedule of four doses in children from around five months of age. It further adds that a 5th dose, given one year after dose 4, may be considered in areas where there is a significant malaria risk remaining in children a year after receiving dose 4.

While India will have to wait for the vaccination to be introduced here with no date set as of now, the vaccine is currently for areas with highly seasonal malaria or areas with perennial malaria transmission with seasonal peaks; countries may consider providing the vaccine using an age-based administration, seasonal administration, or a hybrid of these approaches. WHO adds that countries should prioritise vaccination in areas of moderate and high transmission. Decisions on expanding to low transmission settings should be considered at a country level, based on the overall malaria control strategy, affordability, and programme considerations. Given this spread and the need for a vaccine, Dr. Kate O'Brien, WHO Director of the Department of Immunization, Vaccines and Biologicals, had noted that with the initial limited supply of the current vaccine "it is crucial that children living in areas where the risk of disease and need is highest are prioritised first." Efficacy of RTS,S/AS01 vaccine is modest, yet still provides significant public health benefits. The current vaccine works well with the malaria control interventions recommended by WHO including insecticide-treated bed nets, indoor residual spraying of insecticides, rapid diagnosis and treatment etc.

Experts say climate change emerges as a major driver, affecting malaria transmission and overall burden. Changing climate conditions enhance the sensitivity of the malaria pathogen and vector, facilitating its spread. WHO emphasises the substantial risk climate change poses to malaria progress, necessitating sustainable and resilient responses.

"The science spells it out — as the climate changes, vulnerable corners of South East Asia face a growing threat of malaria. Rising temperatures let mosquitoes spread to new turf, while warmer, more humid conditions help the parasite prosper inside the bug. Regions like eastern India, the hill tracts of Bangladesh, parts of Myanmar, and Indonesian Papua already grapple with malaria. With increased travel around the globe, infections could easily spill over into new areas," said Dr. Kaushik Sarkar, director, Institute for Health Modelling and Climate Solutions. He added that to get ahead of this, India needs to double down on ways to battle the bite, from better tracking of illnesses to making prevention and treatment more available where it's needed most.

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