Is vaccine the magic bullet for malaria elimination? A reality check.

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Abstract:

Malaria remains a major health burden especially for the developing countries. Despite concerted efforts at using the current control tools, such as bed nets, anti malarial drugs and vector control measures, the disease is accountable for close to a million deaths annually. Vaccines have been proposed as a necessary addition to the armamentarium that could work towards elimination and eventual eradication of malaria in view of their historical significance in combating infectious diseases. However, because malaria vaccines would work differently depending on the targeted parasite stage, this review addresses the potential impact various malaria vaccine types could have on transmission. Further, because of the wide variation in the epidemiology of malaria across the endemic regions, this paper proposes that the ideal approach to malaria control ought to be tailor-made depending on the specific context. Finally, it suggests that although it is highly desirable to anticipate and aim for malaria elimination and eventual eradication, many affected regions should prioritize reduction of mortality and morbidity before aspiring for elimination.