



Comparative Assessment of Malaria Treatment Regimens in Ethiopian and Kenyan Secondary Schools: Health Outcomes Analysis

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Abstract

Malaria remains a significant public health concern in sub-Saharan Africa, particularly among secondary school students who are at higher risk of infection due to closer living and social conditions. A comparative study design was employed, utilising data from two sets of secondary schools in Ethiopia and Kenya. A multivariate logistic regression model was applied to analyse the impact of different malaria treatment regimens on student recovery rates with a confidence interval of 95%. In one school district in Ethiopia, students treated with Artemisinin-based combination therapy (ACT) had a 40% higher chance of recovery compared to those using traditional herbal remedies. In Kenya, the ACT regimen showed an 80% improvement over placebo groups in terms of fever resolution. The study highlights the effectiveness of ACT regimens in enhancing student health outcomes and recommends their wider implementation in both countries' secondary schools for improved malaria control. Schools should adopt standardised treatment protocols, with periodic training on malaria prevention and management strategies provided to teachers and students. Further research is recommended to explore long-term efficacy and cost-effectiveness of ACT regimens. Malaria, Secondary Schools, Treatment Regimens, Student Health, Multivariate Logistic Regression Treatment effect was estimated with $\text{text}\{logit\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, African, Malaria, Epidemiology, Control, Healthcare, Systems*

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