Prevalence and Intervention Effectiveness of Malaria in Rural Tanzanian Communities Post-Indoor Residual Spraying: A Three-Year Evaluation

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Abstract

Malaria remains a significant public health concern in rural Tanzania, particularly affecting communities living in endemic areas. A cross-sectional study design was employed to collect data from randomly selected households within identified malaria-endemic villages. IRS application rates were recorded, and entomological parameters were monitored. Malaria prevalence was assessed through rapid diagnostic tests (RDTs). Malaria prevalence decreased by 40% post-IRS intervention compared to baseline levels in . The IRS programme demonstrated significant effectiveness in reducing malaria transmission, with no resurgence of the disease within the studied period. Continue and expand IRS programmes in conjunction with other preventive measures for sustained malaria control in rural Tanzania. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African, Geographic, Malaria, Spraying, Control, Epidemiology, PublicHealth*

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