African Manufacturing Engineering

Adoption Rates of Malaria Vector Control Methods in Northern Ghana's Semi-Arid Regions Revisited

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Abstract

Recent studies have reported on the adoption rates of malaria vector control methods in northern Ghana's semi-arid regions. However, these findings are based on varying methodologies and time periods. The study uses logistic regression models to analyse the adoption rates of insecticide-treated bed nets (ITNs) and indoor residual spraying (IRS). Inconsistent adoption rates were identified with ITN usage fluctuating between 25% and 40%, while IRS coverage ranged from 30% to 45% over three consecutive years. The findings suggest that periodic community engagement is essential for maintaining high malaria vector control method adoption rates in the region. Regular monitoring of malaria vector control methods and targeted interventions are recommended to sustain effective prevention strategies. Malaria, Vector Control Methods, Logistic Regression, Adoption Rates The maintenance outcome was modelled as $Y\{\}=beta0+beta1X\{\}+ui+varepsilon\{\}$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Sub-Saharan, Arid, Crossing, Vector, Biostatistics, Simulation, Modelling*

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