African Public Health Nursing

Chemical Spraying for Disease Vector Management in Urban Lagos, Nigeria: A Literature Review

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Abstract

Urban Lagos, Nigeria faces significant challenges in disease vector management due to its densely populated areas and inadequate public health infrastructure. A systematic search was conducted using multiple databases, with inclusion criteria set based on study design, population type, intervention details, and outcome measures. Studies were assessed for quality using predefined criteria. Chemical spraying interventions showed an average reduction of 35% in adult mosquito populations over a six-month period, though variability was observed across different urban settings. The evidence suggests that chemical spraying can be a viable intervention for managing disease vectors in Lagos, provided it is carefully targeted and monitored to minimise adverse public health impacts. Public health authorities should consider implementing periodic chemical spraying programmes alongside other vector control measures such as larviciding and environmental management. Treatment effect was estimated with $text{logit}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Urbanization, Vector-Borne, Chemical Control, Public Health, Epidemiology, Parasitology*

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