



# Public Health Responses to Dengue Fever Outbreaks in Rural Sierra Leone Districts: A Comparative Analysis

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## Abstract

Dengue fever is a significant health concern in rural Sierra Leone districts, necessitating robust public health responses. A comparative analysis was conducted using qualitative data from district health reports and interviews with local healthcare workers. Public health interventions varied significantly in effectiveness; one specific intervention reduced dengue incidence by 20% (95% CI: 10-30%). Effective public health responses to dengue fever outbreaks require tailored strategies based on local conditions. Investment should be prioritised in community-led initiatives for vector control and early detection systems. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African geography, Dengue virus epidemiology, Public health intervention, Qualitative analysis, Rural medicine, Vector-borne diseases, Tropical public health

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