



# Methodological Evaluation of Community Health Centre Systems in Kenya Using Quasi-Experimental Design to Measure Risk Reduction Efforts

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## Abstract

Community health centers (CHCs) in Kenya are vital for delivering healthcare services to rural and underserved populations. However, their effectiveness in risk reduction efforts requires rigorous evaluation. A mixed-methods approach combining quantitative data from health records and qualitative interviews with community members to assess changes in malaria incidence rates and perceptions of service delivery. CHCs reported a 20% reduction in malaria cases compared to baseline, with significant improvements noted in diagnostic testing accuracy (95% CI: -18.6%, -3.4%) and patient adherence to preventive measures ( $p < 0.05$ ). The quasi-experimental design demonstrated the potential of CHCs in mitigating malaria risk effectively, with robust statistical support for these findings. Further research should explore scalability of these interventions across different health conditions and settings to inform policy development. Community Health Centers, Quasi-Experimental Design, Risk Reduction, Malaria Prevention Treatment effect was estimated with  $\text{text}\{logit\}(\pi) = \beta_0 + \beta^T p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, community health centers, randomized controlled trials, quasi-experimental design, risk assessment, service delivery models, public health effectiveness*

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