



# **Implementation of Universal Basic Health Insurance Schemes in Nairobi Urban Slums: Cost-Effectiveness Analysis**

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### **Abstract**

This study addresses a current research gap in Medicine concerning Implementation of Universal Basic Health Insurance Schemes in Urban Slums of Nairobi, Kenya: Cost-effectiveness Analysis in Kenya. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Implementation of Universal Basic Health Insurance Schemes in Urban Slums of Nairobi, Kenya: Cost-effectiveness Analysis, Kenya, Africa, Medicine, case study This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with  $\text{text}\{\logit\}(\pi) = \beta_0 + \beta_1 p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Kenya, Nairobi, Urban Slums, Public Health Insurance, Cost-Benefit Analysis, Universal Coverage, Epidemiology, Health Economics, Healthcare Access

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